NEW YORK

MEDICAL AND PHYSICAL JOURNAL.

JULY, 1829.

ART. I. *An Essay on the History, Causes, and Treatment of Typhus Fever.* To which the Annual Prize for the year 1828 was awarded by the Medical Society of the State of New York. By ALFRED T. MAGILL, M. D., of Winchester, Virginia.

"Ex principiis nascitur probabilitas; ex factis vero veritas."

THE word Typhus, according to most writers, is derived from the Greek noun τυφος, stupor, a symptom which frequently supervenes, sooner or later, in the progress of the disease; oftener, however, coming on towards its termination, than existing in its earlier stages. The learned and scientific Good, however, refers the derivation of the term to the verb τυφω, which signifies "to smoulder," or "to burn and smoke without a vent," and thinks it "admirably expressive of the general nature of the fever to which it was applied at first, and which it designates at present; which burns not with open violence as the cauma, but with a sort of concealed and smothered flame."* There are, however, various other appellations by which this fever is known; such as the jail, camp, hospital, and ship fever. It has also been denominated the putrid, malignant fever, and from the frequent presence of petechiæ it is called, on the continent of Europe, febris petechialis, and constitutes the contagious fever of Lind, the febris inirritativa of Darwin, and the nervous fever of other writers.

The history of this fever is rather obscure. The ancient authors on medicine make no particular mention of it, from which we may conclude, that they were either unacquainted with it, or, considering it merely as a variety of the common fever of their respective countries, did not deem it worthy of

* Good's Study of Medicine, vol. 2, p. 123.

special notice. Sydenham was probably the first medical writer who described this disease, not, however, by the name under which it is now known. The account of it is contained in his "Essay on the rise of a new Fever." He says, "As soon as it began to thaw in February, 1685, the fever I intend to treat of here appeared, which I esteem a new sort of fever, and altogether unlike the fever of the eight foregoing years."* No one can read the symptoms of that fever as narrated by that great and good man, without remarking the striking similarity between them and the assemblage of symptoms which constitute the typhus of the present day; and, indeed, it has been considered as such by subsequent writers.† Sydenham does not mention that this fever was at all contagious, but attributed it to a particular state or constitution of the atmosphere.

In the year 1577, more than one hundred years anterior to the date of this fever described by Sydenham, a disease suddenly made its appearance, during the Black Assize at Oxford, in the month of July. This fever is generally cited as an instance of jail fever, and as affording incontestible evidence of its contagious character. The infection in this instance was supposed to have been communicated by one Rowland Jencks, a criminal, who "was arraigned and condemned in the presence of *a great number of people to lose his ears. Judgment being passed, and the prisoner taken away,* there arose such an *infectious damp* or *breath* among the people, that *many there present, to the apprehension of most men were there smothered;* and others so deeply infected that they lived not many hours after."‡ This fever is no doubt one of the instances alluded to by lord chancellor Bacon, when he says, that "The most pernicious infection, next to the plague, is the smell of the jail, where prisoners have been long, close, and nastily kept; whereof we have had, in our time, experience twice or thrice, when both the judges that sat upon the jail, and numbers of those who attended the business, or were present, sickened upon it and died."

Nearly nine years subsequent to this event, an infectious fever (as it was called) made its appearance at Exeter, during the assizes there, in March, 1586. This fever was attributed by many to contagion communicated by some Por-

---

* Wallis Syd., vol. 2, p. 315.

† Wallis, in one of his notes to this essay, says, "Dr. Cullen considers this as a species of typhus, but of the milder kind, and arranges it under that genus by the name febris nova."

‡ Bancroft on Fevers, p. 430.

tuguese seamen, "who had been some time before taken at sea, coming with fish from Newfoundland, and "cast into the deep pit and stinking dungeon" of the "goale of the castle of Exon;" and "had no change of apparell," but being left to lie "upon the ground without succour or reliefe, were soon infected."* These persons, when brought into court for their trial, were supposed to have communicated the contagion to many of the individuals present.

"From that time (says Bancroft) I can discover no instance of any remarkable mortality or sickness, supposed to have been produced by jail infection, until the year 1730, (an interval of one hundred and fifty-three years,) when, at the Lent assizes, some prisoners, who had been removed from Ilchester jail, to take their trial at Taunton, were believed to have infected a part of the court, and produced a contagious disease"† of which many died.

Huxham, also, mentions in vol. 2, p. 82, of his work de Aere, &c., that a disease, which he calls "Febris putrida, contagiosa ac pestifera valde," broke out at Launceton, in the month of April, 1742. He says, "genita hoc in canceribus febris et per comitia provincialia disseminata longe lateque."

In the year 1750, a fever made its appearance "during the sessions of the Old Bailey, which proved fatal to the lord mayor, and two of the judges, with several eminent and other persons, who, as was asserted, and is now generally believed, were infected by the contagion of jail fever brought into the court from Newgate."‡

Previous, however, to this occurrence at the Old Bailey, two essays had appeared on the subject, from the pen of Ebenezer Gilchrist, of Dumfries, which were published in the fourth and fifth volumes of the Edinburgh Medical Essays and Observations. He called it "nervous fever." Neither its origin nor its propagation was attributed by him to contagion.

A considerable time after this, Huxham and sir John Pringle published their essays on typhus—Huxham under the appellations of "slow nervous fever" (febris lenta nervosa) and "malignant putrid fever,"§ and Pringle under that of

---

* Bancroft, p. 434.

† Ibid, p. 110.

‡ Ibid, p. 111.

§ The "slow nervous fever" and the "malignant putrid fever" of Huxham, are obviously only different *grades* of the same disease; they correspond to the typhus mitior and gravior of nosologists.

"jail or hospital fever." Both these writers were strenuous advocates for the attribute of contagion as belonging to this fever. Subsequent to these publications we find much more attention paid to this subject, and its pathology and causes have been investigated with much ardor and diligence. Many of those who have written on it have contended for its being contagious; some there are, however, who dissent from this doctrine, and deny that it possesses any such property.

This fever has been divided by nosologists into the *typhus mitior*, (mild typhus or nervous fever,) and *typhus gravior*, (malignant or putrid typhus;) thus indicating its sometimes mild and sometimes violent character. This distinction appears to us to be entirely useless. It produces an unnecessary multiplication of words; the same language descriptive of one grade being applicable, with a slight variation, to the other; so much so, that both can be easily comprehended in one general description, and it, moreover, leads to no good practical result. The typhus mitior and gravior being only grades of the same disease, are to be treated exactly on the same principles; and that physician who has not sagacity enough to discriminate between a mild and a severe fever, will not have his intellectual vision brightened by such distinctions. Independent, however, of these reasons, we do not think, in practice at least, that the distinction can always be made. However easily it may be done in the closet, it will be found often impossible at the bedside of the patient. Every physician of much experience in this disease, will acknowledge that in a majority of cases, the symptoms are such as to render it doubtful to which grade they belong. Wilson remarks, that "between the worst and mildest forms, there are innumerable degrees which insensibly run into each other;" thus rendering it impossible to draw a distinct line of demarcation between them. Those, therefore, who are in favor of distinguishing typhus into grades, should carry out this principle, and give a separate description of each of its "innumerable degrees;" for there would be just as much ground for this, in a practical point of view, as there is for the other; they should also extend this principle to other fevers, for if this distinction be necessary in typhus, it is equally so, for instance, in yellow fever, for it also has its gradations of violence and mildness. Another objection to it is this: the different grades of this fever are so readily convertible into each other, that, according to the treatment pursued, what was mitior today, may be gravior tomorrow, and *vice versa*. For these reasons we reject these distinctions, which we consider arbitrary and useless.

Armstrong, in his unequalled work on typhus fever,* notices three varieties instead of two. He divides the disease into the typhus of simple excitement, the inflammatory and the congestive typhus; though we have the same objection to his two first divisions, that we have to those of mitior and gravior, yet, nevertheless, we think his arrangement on the whole better than the other; the phraseology which he employs to designate the different forms of this disease is, we think, preferable to that of mitior and gravior, inasmuch as it expresses in itself the real character and pathology of the disease, and strikes at the root of those notions of debility and putrescency as prominent features of this fever, which we derive from books, and which are intimately associated with all our reflections on it; and it moreover includes a form of the disease, which unquestionably demands a separate consideration, i. e. congestive fever. Until the publication of his work, we had no distinct conception of the pathology of congestive fever; his post mortem examinations, however, have revealed its true character; and his graphic pen has delineated with so much accuracy its symptoms, that it cannot fail to be recognized by even the most careless observer. But though we prefer his arrangement to the other, we shall adopt it only in part. We will include his two first divisions in one general description, and then treat of congestive typhus, under a separate head. We will now proceed to an enumeration of the symptoms of typhus.

Symptoms. This fever commences with the same symptoms which usher in the attack of other febrile affections.† A feeling of languor and an indescribable sense of weariness and dejection, are usually the first links in the chain of symptoms which constitute this disease; there is also, usually, some slight gastric distress, sometimes amounting to nausea, together with a total loss of appetite. There is, in some cases, a cold creeping sensation over the body; in others, particularly when the attack is severe, this coldness amounts

---

* We cannot mention this work, without expressing the unbounded admiration we feel for the talents of him who composed it, and our conviction of its great value. If we were required to put our finger upon a volume, containing the greatest amount of practical information on the diseases of which it treats, we should unhesitatingly select it in preference to any work with which we are acquainted. The neatness, elegance, and perspicuity of its style, the vast fund of practical instruction spread over its pages, and the vital principle of genius which pervades every portion of it, has always rendered its perusal, to us, an intellectual treat.

† Pringle remarks, that "the disease in the beginning is not easily distinguished from any common fever."

to rigor, alternating with quick and transient flushes of heat; the face is pale, with some slight appearance of livor under the eyes; and there is more or less of a load, pain, or giddiness of the head—the pulse at this time is generally weak, low, and frequently irregular. This assemblage of symptams constitutes what has been aptly termed by Armstrong the stage of oppression. This may continue from a few hours to as many days; sooner or later, however, evidences of decided reaction supervene. The face loses its paleness and generally becomes much flushed; the pulse increases in frequency; in some cases it is tense and hard; the headache becomes excruciating, and the mind is often overwhelmed with delirium. The skin grows very warm, and the heat appears to have a penetrating quality.* The thirst becomes considerable, and, in some cases, almost unquenchable. In milder cases these symptoms are much less prominent and severe: in such cases, the pulse, though quicker than natural, is neither hard nor strong, and the uneasiness of the head not near as great; the delirium, if present, is seldom violent and uncontrollable as in the severer modifications of the disease. Petechiæ also frequently make their appearance, though they are by no means peculiar to typhus, but frequently occur in other fevers; the mouth is parched and dry, and the tongue, from the beginning, is more or less furred, and, in the progress of the disease, generally brown, and sometimes black; the bowels are often much disposed to constipation, and the secretions and excretions are much charged; the alvine discharges becoming dark and offensive, and the odor of the breath and body very unpleasant. After a longer or shorter time, varying from the seventh to the eighteenth day, and, in severe cases, sometimes a much shorter period, a change takes place in the character of the disease; what Armstrong calls the stage of collapse supervenes, and if the patient has been properly treated during the period of excitement, it is usually the beginning of a return to health, which is indicated by an abatement of all the

---

* Pringle notices this symptom. "On first touching the skin," says he, "the heat seems inconsiderable; but upon feeling the pulse for some time, I have been sensible of an uncommon ardor, leaving an unpleasant sensation on my fingers for a few minutes after. The first time I observed this, I referred it to the force of imagination, but was assured of the reality by repeated experiments, and by the testimony of others, who, without knowing of my observation, had made the same remark." Other physicians have also mentioned it. Frank, in allusion to it, says, "sœpe manifeste acer digitosque urens." It has been called by others a biting heat. It is not, however, peculiar to typhus, as we have observed it in other fevers.

symptoms; but if (particularly in severe cases) the fever and topical inflammation, which are almost always present in such cases, have not been kept in proper subjection, it is a change pregnant with the utmost danger to the patient; the delirium is lost in profound stupor, the tongue becomes exceedingly black and dry; dark sordes collect about the teeth; subsultus tendinum, and what have been denominated symptoms of putrescency, appear; the petechiæ, if present, turn to a dark purple color; hemorrhages from the stomach, bowels, and kidneys, (the last making the urine dark,*) come on, or "profuse ichorous and involuntary stools" soon extinguish the remains of life. The patient, however, is sometimes carried off by convulsions.

Prognosis. In forming our prognosis of the probable event of this fever, we must not deduce our opinion from any one symptom, however prominent it may be, but rather from mature deliberation upon the symptoms taken collectively: as the chief danger, not only in this, but in all fevers, arises from the disorganizing effects of high and uncontrolled excitement, upon some one of the vital organs, it follows, that if this be moderate, or if it be even high, and we find that we can keep it in due subjection, then we may rationally anticipate a favorable termination; but if neither of these conditions obtain, then we may justly dread the event. But to be more particular: we may calculate on recovery when the delirium is slight, the strength not much impaired, the tongue moist and beginning to clear, bowels loose and easily operated on by medicine; when deglutition is performed without difficulty, and the respiration is free and easy,† with a soft and moist skin. A deafness coming on during the fever is considered by many a favorable sign.‡

---

* Huxham says, "I have frequently seen the urine, in petechial fever, almost black."

† Fordyce on Fever, page 221, observes, that, "although the patient should be insensible to all external objects, although he should sleep very little, yet, if the *deglutition and respiration* should remain unimpaired, the patient is not to be despaired of; it happens even that he most commonly recovers. But if he *respires with great difficulty*, or hardly at all, or if the deglutition be almost totally prevented, or if the attempt to swallow throws him into convulsive contractions, he rarely recovers."

‡ We have mentioned deafness as one of the favorable symptoms in typhus, more upon the authority of others, than on our own conviction of its being such; to us it clearly indicates a degree of fulness of the cerebral vessels, which, in our opinion, is much to be deprecated. That it is owing to this cause is plain from its being removed by evacuants, and by its returning if these are discontinued. Every physician must have witnessed this. Hippocrates testifies to this fact. In section 4th, aphorism 28th, he

Besides the signs already mentioned, there are what are called critical discharges. Among the most frequent of these, is sweating; this evacuation was at one time considered of so much importance in the cure of fever, that it was thought a *sine qua non* to recovery,* and accordingly the most heating and pernicious means were employed to force this discharge. This destructive and irrational practice is fortunately almost exploded at the present time, and physicians now, with the exception of using a few antimonials, generally leave it to nature, who effects it best in her own way.†

The most frequent critical discharge is a diarrhœa; this, when of a proper kind, very often terminates the fever; it is always most beneficial when the stools are bilious and somewhat consistent; profuse liquid and colliquative discharges always do harm, and often irretrievably prostrate the patient in a very short time. This last description of diarrhœa is, of course, to be immediately arrested; the first kind ought rather to be encouraged. Hemorrhages, likewise, often prove critical in this fever; the blood may proceed from the nose, stomach, or bowels. Persons have been often rescued from the grave, when given up as lost, by the opportune occurrence of hemorrhage from the bowels, and other parts; they should always admonish the practitioner to relieve nature from the necessity of resorting to this hazardous alternative, by using proper depletion in the first stages of the disease; we say hazardous alternative, because it often comes too late, and as often is excessive in quantity. Hemorrhage only does good in typhus when it occurs early in the disease, before the constitution has been shattered by the long continuance of the fever. This fact did not escape the sagacious mind of the father of medicine. In one of his

---

remarks, "Quibus biliosæ sunt egestiones, surditate superveniente cessant; et, quibus surditas est, biliosis supervenientibus cessat." Although in the first part of this aphorism, he seems to consider the cessation of the bilious discharges as the effect of the deafness, yet it is obvious from the latter part of it, in which he says this deafness is removed by the recurrence of these evacuations, that he had mistaken the cause for the effect.

* Huxham declares that "he never once saw a malignant typhus cured, till more or less sweat had issued."

† To Sydenham the praise is justly due for having put down the pernicious practice of endeavoring to force a perspiration, by the use of the most heating and inflammatory measures, and of substituting in its place the cooling and evacuating plan of treatment. It constituted by no means the least of his triumphs over the deep rooted prejudices of the times in which he lived.

aphorisms, he says, that "livid, bloody, fœtid, and bilious stools, coming on in continued fevers, are alike unfavorable; but a timely appearance of them beneficial."*

This fever also terminates occasionally in glandular swellings. Dr. Donald Morris, in his work on diseases of the army, observes, that "swellings of the parotid glands appeared in many subjects towards the decline of the fever, which came to suppuration and proved critical." Pringle, and other writers, also mention their occurrence, and recommend an early incision to discharge the pus.

Having enumerated the favorable symptoms, we will now briefly mention those which portend the approach of death. The bad signs are high delirium or deep stupor, subsultus tendinum, black, dry, and tremulous tongue, and inability to protrude it beyond the lips; difficult deglutition, and impeded respiration; weak, irregular, and intermitting pulse; great restlessness, evinced by frequent attempts to get out of bed, or by continual tossing from one side of it to another; the surface of the body bedewed with a cold sweat; frequent colliquative stools and hemorrhage from the mouth, ears, &c.; sometimes the patient expires in convulsions. Such is the dark catalogue of symptoms which declare death to be at hand. Even these, however, should not deter us from exertions to save life; persons sometimes recover with nearly all the above mentioned desperate symptoms, and the knowledge of this fact should teach us the important lesson never to abandon, as entirely hopeless, any case of fever; appearances are sometimes fallacious,† and we should never fold our arms in inactivity, though a combination of the worst symptoms exist.

Pathology of Typhus. Typhus fever has been for a long time, and still is with too many, associated with the ideas of debility and putrescency as its standing and prominent symptoms. The prejudices on this head, however, are beginning to lose some portion of their sway, in consequence of the flood of light which has been shed on the pathology and treatment of typhus, by some recent publications. Among these the work by Armstrong stands conspicuous; the appearance of which may be said to have constituted a new era in the history of typhus. But while bestowing due praise on

---

* "Excretiones in febribus non intermittentibus lividæ, et cruentæ, et graveolentes, et biliosæ, omnes malæ sunt. At probe secedentes bonæ.

† Hippocrates remarks, that "acutorum morborum incertæ admodum, ac fallaces sunt prædictiones."

this distinguished writer, let us not forget the illustrious Sydenham, whose sagacious and strong mind, more than a century and a half ago, discerned the true character of this fever, and suggested a course of practice, which, though in a great measure lost or forgotten amid the conflicting opinions of subsequent writers, has been revived in the present century, and is now, with but little variation, followed by all those who do not still hold to the doctrine of debility as belonging to this disease in all its stages. But to return to the subject. We will endeavor to show, from the various circumstances and phenomena incident to it, that, so far from being a disease of debility, it is essentially one of excitement, and frequently of inflammation as its consequence. One form of typhus, (i. e. the congestive,) will not, of course, be comprehended in this.

A state of real debility is a condition of the system which is, generally, (we might say always,) the consequence of long continued excitement, or the more gradual, though not less certain, result of an insidious chronic affection, preying upon some important and vital viscus. This *real debility* is always increased by such remedies as are termed evacuants, and, on the contrary, is diminished by such means as add tone to the system; but if, in the commencement of a fever, a person appears very weak, and if we find that the administration of tonics and stimulants only increases the debility, and, on the other hand, that evacuants, such as bleeding and purging, lessen it, the legitimate conclusion from these facts is, that this weakness is not real, but only apparent. This, then, is the case with the debility in the primary stages of typhus; it is increased by the exhibiting of stimulants and lessened by evacuating measures. Armstrong, whose experience was very great in this fever, bears testimony to this fact: "In the first stages of typhus," says he, "the debility is only apparent, and chiefly dependent upon the preternatural accumulations of blood in the veins about the head, heart, liver, and other internal parts, while there is less circulating upon the external surface of the body, than in a natural state. In the second stage, the debility is still only apparent, being then the consequence of over excitement of the heart and arteries; but in the third and last stage, beyond all dispute, the debility is real, as it is then connected with a general collapse, which sooner or later succeeds to a state of febrile excitement, as certainly as exhaustion follows a fit of intoxication." And a little farther on he says, that though "this proposition is not evident at first sight, yet it is as certainly true as any in physic, and is proved from the debility in the

first and second stages being increased by wine and cordials and lessened by a spare regimen and evacuations."*

Every physician must have witnessed the positively strengthening effects of cathartics in typhus fevers, before the constitution has been really debilitated by long continued excitement. A patient who has been carried to the close stool, after a copious evacuation from his bowels is able to get up, and walk without assistance to his bed.† This invigorating effect of purgatives in typhus and other fevers, is of frequent occurrence, and is totally unaccountable upon the the supposition of its being a disease of debility; we commit, therefore, an egregious error when we mistake this apparent for real debility. In the strong language of Rush, "the clown who supposes the crooked appearance of a stick, when thrust into a pail of water, to be real, does not err more against the light, than that physician errs against a law of the animal economy, who mistakes the debility which arises from oppression for an exhausted state of the system, and attempts to remove it by stimulating means." But again, if this disease be one of great debility, there are many of its phenomena, mentioned by those who advocate this very theory, totally inexplicable, and indeed irreconcilable with this view of the disease. We presume every one will admit, that, if real debility be a characteristic of this fever, what are obviously debilitating discharges must increase this symptom, and of course prove prejudicial to the patient; but that this is not the fact, we will endeavor to prove from the testimony of others. Wilson observes, that "a spontaneous flow of blood from different parts of the body, we have seen, is frequently attended with an abatement, or total removal, of the symptoms of synocha, and, what we should not *a priori* have expected, sometimes those of typhus;"‡ and in another place, when speaking of typhus, he says, "I have often seen them (i. e. hemorrhages) attend a general abatement of the symptoms."‖ We would ask Dr. Wilson how he can reconcile these facts with his notions of typhus fever?

---

* Armstrong on Typhus, p. 25.

† This is also frequently observed in other fevers. Dr. Bryce in his account of the yellow fever on board the Busbridge Indiaman in 1792, observes, that he has "often seen a man carried upon deck, perfectly delirious with subsultus tendinum, and in a state of the greatest apparent debility, who, after one or two copious dark colored evacuations, has returned of himself, and astonished at his newly acquired strength."

‡ Wilson on Fever, vol. 1, p. 142.

‖ Ibid. p. 134.

The good effects of long continued and profuse sweating in this fever cannot be accounted for on the supposition of typhus being a disease of debility. We can well imagine that the loss of quarts of fluid might be salutary in a disease of high excitement, but it could never enter into our conception that the same loss would be beneficial to one who was really and *bona fide* weak; and yet writers mention the good effects of several days' continuance of profuse perspiration.* A diarrhœa also, as was mentioned before, is often critical in this fever. We have thus endeavored to prove from the very character of the debility in the first stages of typhus, and from the phenomena and circumstances incident to it, that the opinion of those who consider it a disease of genuine debility, and, as such, requiring tonic and stimulating remedies for its cure, is erroneous.

We will now take the opposite side of the question, and will endeavor to prove that it is a disease of excitement, and often of inflammation as its consequence. In the first place we will observe, that all the circumstances and phenomena of typhus already mentioned, and which are inexplicable upon the ground of its being a disease of debility, are easily accounted for upon the supposition of its being a disease of excitement and often of inflammation. The opposite effects of stimulants and evacuants in the first stages of typhus, the relief afforded by hemorrhages, profuse and long continued sweating, diarrhœa, and the abundant and free discharge of matter from glandular swellings, are perfectly consonant to, and exactly what we would expect from, this view of the disease. But we have still better ground for this opinion: Post mortem examinations prove it to be correct; they establish, beyond doubt, that death in this fever is generally produced by the destructive ravages of inflammation on some one organ or organs of our frame. Many of the writers on this fever have recorded the results of their dissections. Pringle relates the appearances, on dissection, of ten persons who died of jail fever, in all of which, either inflammation or its effects were plainly visible; a majority of them had suppuration of the brain. Thomas says, "The usual appearances on dissection are, a softness and flaccidity in the solids; a dissolved state of the fluids, particularly of the blood; collections of sanious matter in the different cavities; turgescence and inflammation of the thoracic and abdominal

* Morris, in his treatise on diseases of the army, remarks, that the sweating often continued, with the best effects, for several days. Hoffman, also, makes a similar statement.

viscera; and in the interior parts of the brain increased vascularity and collections of serous fluid."* Armstrong mentions that his post mortem examinations always exhibited the appearances or consequences of inflammation. Dr. Dickson, in his account of the contagious fever which prevailed in the Russian fleet, observes, "that the appearances on dissection were strongly illustrative of the frequency of visceral inflammation, in the fever which he saw and described; for the brain, lungs, and contents of the abdomen were severally found to have been attacked, among those who were the victims of this disease."† Ferriar also mentions the appearance on dissection of several persons who had died of typhus, all exhibiting the most unequivocal evidences of inflammation. These dissections seem to have made such an impression on him that he observes, after having mentioned the results of them, that "perhaps local inflammation is more frequently joined with typhus than we are aware."‡

Other accounts of post mortem examinations, corroborative of the above, might be mentioned, but these are deemed sufficient to establish, beyond doubt, the pathology of typhus, and that death in this fever is generally, if not always, the result of inflammation, disorganizing some important part of the animal machine. So universally, indeed, have the traces of inflammation been observed in those who die of this and other fevers, that many physicians have adduced it as the cause of fever. Clutterbuck, Ploucquet, Mills, Marcus, Reid,‖ and Broussais, are the great advocates for the local origin of fevers. The latter especially, a physician of eminent talents and much experience, has gained great celebrity by the ingenuity and ability with which he sustains his doctrine, and by the imposing array of talent which has flocked to his standard. His doctrine is, that fever arises from an inflammation of the mucous lining of the stomach and bowels.

It would be irrelevant to the object of this essay to attempt any thing like a labored refutation of this theory; which, en-

---

* Thomas's Practice, p. 49.

† Armstrong on Typhus, p. 154.

‡ Medical Histories, p. 76.

‖ Clutterbuck and Mills locate the inflammation, which they consider the cause of fever, in the brain. Ploucquet contended that fever was sympathetic of an inflammation of the brain, stomach, and intestines; and Reid considered its seat to be the spine. Professor Marcus, of Bavaria, taking a more enlarged view of the subject, regarded all inflamed organs as equal causes of fever.

forced with all the "zeal, energy, and talents which this celebrated school can bring into the field," has spread itself extensively over the continent of Europe, and having crossed the waters of the Atlantic, can number among its supporters many of the distinguished medical characters of this country. We are not among those, however, who assent to the truth of this doctrine; on the contrary, we reject it unqualifiedly, as being, in our opinion, utterly at war with the true pathology and phenomena of fever. We do not believe fever arises from inflammation of the mucous membrane of the stomach for the following reasons. 1st. Because in many cases we have no evidence of its existence at the commencement of fever, or for even several days after; and not unfrequently during the whole course of the disease, we have no one symptom indicative of its presence. 2d. If inflammation of the mucous membrane of the stomach and bowels be the cause of fever, then we should always have, what but rarely exists, some degree of tenderness of the epigastrium, and a constant mucous diarrhœa; the latter symptom, particularly, should be present in every case of fever; for it may be laid down as an almost invariable rule, that a part which in a healthy state secretes a fluid, has that secretion increased when it becomes inflamed; this effect we see produced in the mucous membrane of the nose, larynx, and trachea in catarrh, for example, which consists in an inflammation of these parts; and to cite a case still more in point, we find it to be strikingly the case in dysentery. All acknowledge that the mucous membrane of the intestines is inflamed in this disease, and we see increased secretion of mucus, the result of it; the same thing happens when the lining membrane of the bladder is inflamed; as we have not, therefore, this discharge in typhus, in which inflammation of the mucous membrane of the stomach and bowels is assumed to exist, we conclude that it is not present. 3d. We cannot conceive inflammation to exist in the first stage of fever; when the action of the heart and arteries is comparatively weak and feeble, and the blood, as a necessary consequence of this weakened action, accumulates in the venæ cavæ and their branches. 4th. This very accumulation of blood about the heart, inasmuch as it affords to it an increased quantity of its natural and legitimate stimulus, is abundantly sufficient to produce a reaction of this organ, or, in other words, to excite a fever, without bringing in a cause (i. e. inflammation of the stomach and bowels) which we cannot conceive to exist under such circumstances. And, 5th. Post mortem examinations do not prove it; they may, indeed, exhibit the evidences of inflam-

mation in the lining membrane of the stomach and bowels, in the head, liver, lungs, spine, &c.; but this by no means proves, that the inflammation which is found to have existed in these different parts was antecedent to and produced the fever; and if we admit inflammation as a cause of fever, when found in the mucous membrane of the stomach and bowels after death, we must make the same admission when this inflammation is discovered to have existed in other parts; and, as a consequence of this, we should have as many differents seats of fever as there are viscera. For these reasons we reject the doctrine of Broussais and of all others who contend that fever has "a local habitation;" and in doing so we are sustained by the opinion of the most eminent pathologists of the present day. Laennec affirms, that the organic changes which we find after death from fever, are "*evidemment posterieures a la fievre*, et ne peuvent, par consequent, etre regardes comme sa cause."*

The views of those who would limit the seat of fever to some one viscus are very unphilosophical; "they narrow an important subject which disdains such petty limits." Fever is what Dr. Hosack, one of the most distinguished physicians of this country, describes it to be, "a disease of the whole system; it appears no less in all the faculties of the mind than in all the functions of the body; it shows itself in every organ of our frame, and affects every nerve and fibre of the system; the absorbing, the circulating, and excreting system of vessels, are all affected by it; in a word, it is omnipresent; it has no one pathognomonic symptom, but is constituted by a concourse of symptoms, and these variously combined in the various forms that fever assumes, depending upon the cause whence it proceeds, and the condition of the body in which it occurs."†

In rejecting the doctrine of Broussais as to the local origin of fever, we entirely concur with Armstrong in the opinion, that inflammation is the product of preceding excitement, and that its particular seat is determined by the previous condition of the organ which it attacks; this condition is a debility of the organ affected.‡ From what we have seen we think the head is most frequently affected.

---

* Med. Chir. Review, Jan. 1825, p. 16.

† Appendix to Thomas's Practice, p. 948.

‡ Ferriar long ago advanced this opinion; he says, that "during the increased action of the circulating system, if any part of the body be originally weak, or have been rendered infirm and irritable by preceding disease, congestion and its consequence may be expected there." Med. His. p. 150.

Congestive Typhus. Previous to the appearance of Dr. Armstrong's admirable work on typhus fever, this form of the disease had not attracted the attention it merited from physicians; and, in fact, we knew little or nothing of its nature. In the works of Sydenham we find the first particular notice of congestive fever; he relates the circumstances of one case only, but from the confident tone in which he spoke of what would be the effect of venesection in it, we may fairly presume that he had met with cases of the like description before. In allusion to this particular form of the fever, he remarks, "that all the symptoms proceed from nature's being in a manner oppressed and overcome by the first attack of the disease, so as not to be able to raise regular symptoms adequate to the violence of the fever; all the appearances being quite irregular. For the animal economy being disordered, and in a manner destroyed, the fever is thereby depressed, which in the true natural order generally runs high. I remember (continues he) to have met with a remarkable instance of this, several years ago, in a young man I then attended; for though he seemed in a manner expiring, yet the outward parts felt so cool, that I could not persuade the attendants he had a fever, which could not disengage and show itself clearly, because the vessels were so full as to obstruct the motion of the blood."* After the time of Sydenham, no particular notice appears to have been taken of congestive fever. It is true, that Drs. Jackson and Clark, almost a century after, gave some imperfect account of it; but until the appearance of Armstrong's work, our notions of the nature of this fever were very obscure; he has the high merit of having clearly and ably elucidated its pathology; and of having opened a new field for medical enquiry and research. The disease, according to him, consists in an engorgement or distension of the large internal veins; and differs from his other divisions of typhus in having no stage of excitement or reaction of the heart from the first shock of the disease. We cannot do better than copy his description of the symptoms of congestion; they are portrayed in his best style. "The attacks (says he) of the most dangerous forms of the congestive typhus are generally sudden, and marked by many remarkable symptoms: an overpowering lassitude; feebleness of the lower limbs; deep pain, giddiness, a sense of weight in the encephalon; a dingy pallidness of the face; anxious breathing; damp, relaxed, or

* Wallis's Sydenham, vol. 2, p. 351.

dry withered skin; and those peculiar conditions of the temperature which have been noticed above.* The pulse is low, struggling, and variable; the stomach irritable; frequently there is an inability from the first to hold up the head; and the mind is more often affected with dulness, apprehension, and confusion, than with delirium. The whole appearance of the sick impresses the attentive practitioner with the idea, that the system in general, and the brain in particular, are oppressed by some extraordinary load. Both the manner and look of the patients undergo early and great alterations; sometimes they slowly drawl out their words, or utter them in a hasty and yet imperfect mode, like people who slightly stammer when embarrassed; they not unfrequently seem as if stunned by a blow, half drunk, or lost in a reverie; and at times have the bewildered aspect of persons suffering under the first shock of an overwhelming misfortune. The eye is occasionally glassy and vacant, without redness; but at other times it is heavy, watery, and streaked with blood, as if from intoxication or want of sleep. At the commencement the pulse is often less altered as to frequency than might reasonably be expected, yet in general it becomes very rapid towards the close; the tongue is usually little altered in the first stage; but in the last, it is frequently rough, foul, and brown; the bowels are mostly very torpid in the beginning, and the stools procured dark and scanty; whereas, in the last stage, the bowels are generally loose, and the stools copious and involuntary. Eructations are not uncommon at all times, and the epigastric region is often much inflated. On account of the general torpor, the secretions are diminished or suppressed; and, as justly remarked by Dr. Robert Jackson, the skin is often in that peculiar state, that if blisters be applied, they either do not act at all, or so defectively, as to leave the appearance as if the part had been seared by a heated iron. Petechiæ in general appear earlier in these than in any other varieties of typhus; and in the last stage there are sometimes gangrenous spots on the extremities, oozings of blood from the mouth and nostrils, and hemorrhage from the bowels."†

"There are comparatively milder forms of congestive typhus, in some of which the patient walks about for a few days after the infection has begun to operate, and complains little, except of uneasiness of the head, loss of appetite, and languor, appearing rather paler than when in health. If

---

* "Shrivelled cool skin."

† Armstrong on Typhus, p. 74.

strictly attended to, however, by a medical observer, a change may usually be remarked in his whole demeanor; he cannot as steadily command his attention as before, is not only restless during the day, but watchful at nights, and soon betrays an absence of mind or loss of memory. At length he becomes garrulous like a half drunken person, or talks inconsistently with his former views and character; after the lapse of a day or two the mental confusion is most obvious to every one—he begins to be unsteady in his gait, and has a heavy intoxicated cast of countenance. If carefully examined at this period, his tongue will be found white, his pulse small, quick, and perhaps irregular; his breathing hurried; his bowels slow; his skin rather hot about the trunk, but coolish and damp on the extremities. If the disease be allowed to proceed, without decided interruption, the hands shortly become tremulous, and the confusion of mind passes into delirium; yet there is still a want of regular excitement, demonstrated by alternate flushing and paleness of the face, the feebleness of the pulse, the unequal state of the whole circulation, the coolness of the extremities, the partially concentrated heat of the trunk, and laxity of the skin. Aural and visual deceptions succeed, and force the patient into violent exertions, and every attempt to overpower him by coercion tends to aggravate the delirium and sink the strength. His tongue grows daily fouler and his debility greater; he begins to pick the bed clothes; and, at last, petechiæ and subsultus tendinum appear. About this period, the general turbulence sometimes unexpectedly abates, and he may become as serene and rational, as to give hopes that a favorable crisis has taken place; but the calm is most frequently deceitful, being soon followed by a universal collapse, in which death occurs, mostly without much struggling. Several cases, nearly answering to the above description, have fallen under my notice, and I have found, that if opportunely and properly encountered, they may generally be subdued; but that if overlooked or improperly treated in the commencement, they will commonly baffle the best directed measures."* There are some other modifications of congestive typhus, which it is deemed unnecessary to take up time and paper to relate, because from what has been said the disease may be easily detected in all its different shapes.

Prognosis. The prognosis in congestive typhus, is to be drawn from the character of all the symptoms present in the

---

* Armstrong on Typhus, p. 75.

disease. If these should become worse, if the delirium should increase, the pulse should continue to sink, the breathing to grow worse, the skin become colder, and the stools be passed involuntarily, it will generally terminate fatally. If, on the contrary, the reverse of this should take place, then we may anticipate a favorable termination.

Pathology. The nature of this fever obviously consists in an accumulation of venous blood in the interior of the body. The cause of this fever, whatever it is, acting either directly or indirectly on the heart,* produces weakened action of this organ, and this latter necessarily causes an accumulation of blood in the venæ cavæ and their branches; less blood than usual being sent to the surface, paleness and shrinking of the features and surface of the body is the necessary consequence. This state of the circulation, in a greater or less degree, is common to the first stage of all fevers; the heart, however, usually reacts under the pressure of venous blood, and drives it with increased force to the exterior, when the fulness of the features and the warmth and color of the skin return; but if, from any cause, the heart should fail in re-

---

* When reflecting on the *modus operandi* of the remote cause of fever, we have often been astonished, that all writers on the subject should have fallen into the error of overlooking its effect upon the action of the heart; and to have confined their observation to the effect (secondary and consecutive) produced on the cutaneous vessels. Thus Armstrong, in his essay on Scarlet Fever, says, "One of the most obvious operations of contagion, like that of dole, is a change of action in the cutaneous vessels, and a recoil of blood from the surface towards the centre." Now, it is perfectly obvious that the action of the cutaneous vessels is dependent on that of the heart; if the action of the latter is weak, so likewise will be that of the former—if strong or vigorous, so will be that of the cutaneous vessels. So long, therefore, as the heart preserves its action unimpaired, the cutaneous vessels must continue in the same state; but the moment that this is weakened, we then observe this "change of action in the cutaneous vessels," which Armstrong considers to be the primary and direct effect of the operation of contagion, and the first link in the series of effects which constitutes fever. In consequence of this weakened action of the heart, less than the usual quantity of blood is sent to the surface, and as the skin is generally flushed, and the features full and expanded, when this action is exalted and vigorous, in fever for example, so likewise when it is weakened we have paleness of the face and shrinking of the features and surface of the body. The phraseology of Armstrong is incorrect and calculated to mislead, when he says that contagion produces "a recoil of blood from the surface towards the centre;" for it would seem from this that the cause of fever impressed upon the contents of the cutaneous vessels a centripetal direction, which is palpably absurd. The reader will find this subject most ably discussed in a work on the practice of medicine by John E. Cooke, M. D., Professor of the Practice of Medicine, in the University of Transylvania, a book containing more sound and original views, and a more correct pathology, than any with which we are acquainted.

covering its energy, then we have a continuance of those symptoms which characterize congestive fever. Whether, however, the cause (i. e. weakened action of the heart) assigned for this accumulation be the correct one or not, dissections demonstrate beyond doubt its existence. Armstrong says, that "In examining the bodies of some patients who had died in the most concentrated attacks of congestive fever, I have found the right side of the heart loaded with dark blood; and, in reflecting upon the phenomena of all, am now inclined to believe, that their pathology is intimately concerned with the functions of the right ventricle. For (continues he) when the action of the right ventricle is diminished, and when it is overloaded by too great an accumulation of blood, it must, by consequence, occasion a remora of venous blood in distant organs; and a sufficient portion of red blood not being thereby returned to the left ventricle, its action, also, must be defective, and its blood not sufficiently oxygenized for the complete purposes of vitality."* The whole of this extract is highly valuable and important, as establishing by post mortem examination the pathology of this form of fever; but a part of it, we think, deserves particular attention, inasmuch as it may serve to explain the cause of the sudden deaths which frequently take place during the prevalence of mortal epidemics. I allude to that part in which he says, that "an accumulation of blood about the heart must produce a remora of venous blood in distant organs." Or, in other words, if the right side of the heart be full and distended with blood, this fulness must extend itself into the cavæ and their branches; following, therefore, the ramifications of the superior cavæ, we find this fulness and distension extending up the jugulars, from thence through the foramen lacerum into the larger sinuses of the dura mater; when, therefore, this accumulation is already very considerable, if, from any cause, it should suddenly increase, it may produce such pressure on the brain as to cause the person to drop down as if in apoplexy. Armstrong, indeed, says, that "the most violent forms of the congestive typhus, resemble apoplexy in their symptoms, to which, indeed, they often have a near affinity in their pathology."† This is the best explanation we can offer of those sudden and occasionally instantaneous deaths which sometimes occur during the raging of violent fevers.

Treatment of Typhus Fever. As our opinion of the character and pathology of typhus fever differs as entirely from that of those who consider it a disease of debility in all

---

* Essay on Typhus, p. 84. † Ibid p. 81.

its stages, so likewise will our treatment be almost diametrically opposite. We think that death not only in this, but in all fevers, rarely arises from mere debility, but from the effects of too great excitement and inflammation upon some part essential to life; our object, then, is to keep both the one and the other, if present, in a state of proper subjugation, by the steady cooperation of those remedies which are in their character strictly antiphlogistic; and we think that these, when timely and judiciously applied, will seldom fail in producing the desired effect. We do not wish to be understood as pursuing exactly the same practice in every instance; for we know that cases often occur, in which it is not necessary to bleed, or even to use very active purgation; all we wish to inculcate is, that the antiphlogistic principle of treatment is to be rigidly adhered to, whether the disease be mild or severe; leaving to the judgment of the physician the proper adaptation of the means to the *grade* of the fever. And first of

Bloodletting. The great value of this remedy in fevers has been known almost since the origin of medical science, and though amid the vicissitudes and revolutions which have been, and are still going on, it has been alternately praised as of indispensable utility, and rejected as pernicious in the extreme, its efficacy appears now to be indisputably established. Some of the ancient physicians were much in the habit of using it. Galen and Celsus thought it one of the most valuable remedies in pestilential disorders, and we are told by Prosper Albinus that the Egyptians let blood in fevers of a putrid tendency. The Arabian physicians, also, frequently made use of phlebotomy in the fevers of that country. The great advocate for bleeding in more modern times is the great Sydenham; he employed it freely in many diseases, and used it in the very fever now under consideration. After contending for the inflammatory nature of the disease and the necessity of curing it by "a suitable method and medicines," he says, that "in order to do this, I direct ten ounces of blood to be taken away from the arm, and, in effect, though the blood in this fever generally resembles pleuritic blood, yet it does not well bear repeated bleeding. But if a difficulty of breathing or a violent pain in the head in coughing, and other symptoms of this kind, show the tendency of this disease to bastard peripneumony, bleeding and purging are to be repeated, till the symptoms entirely disappear."* From this extract we learn, that in mild

* Wallis's Sydenham, vol. 2, p. 319.

cases, "repeated bleeding" was not borne well; but that if symptoms of local inflammation supervened, then the patient was to be bled and purged, till the symptoms were removed. These remarks are strikingly applicable to the fever as it appears at the present day: there are many cases which either do not require bleeding at all, or demand but the loss of a small quantity; such cases, of course, would not "well bear repeated bleeding," but, on the other hand, cases occur, such as related by Sydenham, in which we must bleed again and again, until the symptoms are subdued.

Bleeding, in severe cases of typhus, must be used early in order to derive full benefit from the remedy. If we discover from the symptoms that an acute inflammation of some vital viscus threatens the life of the patient, we cannot commence our operations too soon. We should draw blood *pleno rivo*, and not rest satisfied with a small dribbling stream; the first mode of bleeding is infinitely preferable to the last, as it effects a more speedy reduction of the pulse, and sooner brings on a state of fainting, which is much to be desired in very violent cases, as it is accompanied with vast relief to the inflamed organ.* If the heart should react under this loss of blood, and the symptoms of inflammation reappear, we should, without hesitation, open the vein a second time, and bleed until the patient is relieved. It rarely happens that bleeding thus early and decisively does not entirely remove the inflammation; and though the febrile action may continue for some days after, it is easily kept in check by the use of purgatives, &c. This vigorous practice is only intended for the most exalted grades of this fever. It is every way preferable to the halfway temporizing measures of timid physicians, who will sooner bleed ten ounces every day for a fortnight, than, by one or two copious bleedings in the commencement, extinguish the inflammation and sometimes the fever at once; and in this way producing much less debility, than by pursuing the opposite and much more precarious course. We are by no means to be deterred from this treatment by the appearances of great debility which often present themselves in the commencement of this fever; these are deceptious; beneath them lurks a disease of the most speedily fatal character; which, if not unmasked and detect-

* We have a striking example of the powerful effect of bleeding *ad deliquium*, or until a sensation of faintness or sickness is produced, in cases of violent ophthalmia. The tunica conjunctiva, which before was as red as the presence of arterial blood could make it, will be found almost completely blanched, and the pain and tension of the eye surprizingly relieved.

ed, will soon destroy the patient. The language of Armstrong on this subject is full of wisdom. "If the topical affection (says he) has been but of short continuance, and the vigor of the constitution be merely weighed down, and not really exhausted, let him discard the fears associated with false doctrines, and promptly abstract blood according to the seat and extent of the inflammation, and till local pain and general oppression be relieved."

In severe and violent cases of typhus, there is scarcely any remission, but in the milder, there is generally some little abatement of the symptoms; in such cases it is always best to use the lancet during the period of the greatest exacerbation, or acme of the fever.*

We have before said that cases of fever often occur, which do not require the lancet at all; but that they might safely be trusted to remedies whose operation, though strictly antiphlogistic, were yet inferior in point of power to venesection, such as cathartics, abstemious regimen, &c. There are likewise many cases in which the symptoms of inflammation are so slight, that though bleeding would be proper to lower arterial excitement and thus prevent an increase of the topical affection, yet a much smaller quantity will suffice for this purpose than in the more violent instances.

We trust that in the remarks made on bleeding, we have not evinced an overweening confidence in this remedy. It is certainly one of Herculean powers, and as such ought to be employed with caution. We believe the reputation of this noble remedy has often suffered from its having been mistimed, and from its having been used in insufficient quantity. It is mistimed when it is used after inflammation has continued for several days, and when irreparable injury has been inflicted on some important part; under such circumstances, we need not say that bleeding will be unavailing; nay, worse, it will only hasten death. It is, also, often used in insufficient quantity. We are too frequently palsied by apprehensions of debilitating the patient too much; "But if our fears be so great, and we take away so small a quantity of blood, how is it possible to judge exactly what good or mischief bleeding may do? For, if a disease (which requires

---

* It is not a little singular that some of the ancient physicians should have recommended a different course; they thought that to open a vein in the height of the fever was death; thus Celsus says, "si vehemens febris urget, in ipso impetu ejus sanguinem mittere hominem jugulare est; expectanda ergo intermissis."

four pounds of blood to be taken away in order to its cure, and yet but one is taken away) destroys the patient, it does not, therefore, prove destructive because bleeding was used, but because it was performed in an improper and, perhaps, unreasonable manner."* We have quoted the remarks of Botallus on bleeding in plague, because, we think, they are equally applicable to typhus and other fevers, and because they illustrate in a forcible manner the inadequacy of small bleedings to cure diseases which require copious abstractions of this fluid for their removal.

There are some symptoms of typhus which have been supposed to indicate great debility, and a putrid tendency of the fluids. These are petechiæ and a dissolved state of the blood. These symptoms have been supposed to forbid any thing like depletion, and to demand an opposite course of treatment. We do not deny that where these symptoms make their appearance late in the fever, when the constitution has been shattered by the unrestrained continuance of a mortal disease, depletory measures would be improper; but we by no means agree that they evince any thing like putridity of the fluids or even a tendency to it; this we consider to be totally incompatible with the laws of vitality. When, however, these symptoms show themselves early in the disease, we believe that they indicate a fever of unusual violence, and one which demands active and energetic measures for its relief. Sydenham thought that petechiæ were indicative of a highly inflammatory state of the system; for, when speaking of the benefits of a low diet and cooling regimen in this fever, he remarks, that "it must be indispensably enjoined, when the patient is attacked with a phrenzy, *petechiæ*, purple spots, or any other sign of violent inflammation, occasioned by an overheating regimen."† Petechiæ are very often brought out by such means as excite and inflame the system. Sydenham, to whom we always refer with pleasure, remarks in his "Essay on the rise of a new Fever," "that petechiæ frequently appear, occasioned by an unreasonable use of cordials, and a hot regimen."‡ De Haen, also, says, that the German physicians of his day, converted common fevers, by the use of the "regimen calidissimum," "into the petechial and miliary."‖ On the contrary, symptoms indi-

---

* Botallus on Plague. Wallis's Syd. vol. 1, p. 130.
† Wallis's Syd. vol. 2, p. 325.
‡ Ibid, p. 317.
‖ Thes. Sist, p. 35.

cative of a malignant putrid character, are moderated or prevented by pursuing an antiphlogistic and cooling plan of treatment. In proof of this we have evidence handed down to us, by the bright luminaries of the profession in times that are gone. Sydenham, after contrasting the two methods of treatment, says, "so, likewise, if I find, in the fever under consideration, that the more the patient is heated, the more he is disposed not only to phrenzy, purple spots, *petechiæ*, and the like symptoms; but farther, that the fever, by this procedure, is attended with all sorts of irregular and violent symptoms; and, on the other hand, if it appears that another patient, by treating him according to the method here proposed, (i. e. the antiphlogistic plan,) is quite free from such symptoms, reason shows that the latter method of practice is much the best."* De Haen, who was a strong advocate for the inflammatory nature of this fever and, of course, for venesection, says that petechiæ never appeared in it when he had the management of it from the beginning. "Liceat ne addere, (says he,) quod et medici complures et ego in nosocomio, sive in vigore morborum, sive eorundem in fine, nunquam nostris in ægris, quibus a principio affueramus arbitri, miliaria deterimus;"† and in the same work expresses his belief, that petechiæ would but seldom appear, even in the plague itself, if the antiphlogistic method of Botallus and Sydendam was strictly followed. Dr. Dickson, in his remarks on the contagious fever which prevailed on board the Russian fleet, after mentioning that the appearances on dissection of those who died of this fever were "strongly illustratrative of the frequency of visceral inflammation," observes "that from reflection on numerous facts, it seemed to him an

---

* Wal. Syd. vol. 2. p. 354–5.

† Although, in the above extract, the miliary eruption is mentioned as being prevented from appearing by bleeding, &c., yet as De Haen considered this eruption as nearly the same with the petechiæ, and that those means which prevented the one would also prevent the other from appearing, and that the same remedies would equally remove both when present, we have taken the liberty to quote it in this place as equally showing the effect of bleeding in preventing the appearance of petechiæ. That De Haen considered the petechial and the miliary fever as very nearly related, and that the remarks he made upon one were equally suited to the other, is perfectly obvious from the following extract taken from the end of his section de Febre Petechiali. He says, "Multa de petechiis dicenda supersunt; maxime de iisdem tum proveniendis, antequam fiant; tum cum adsint, curandis; verum cum hoc quoque ad miliarium eruptionem pertineant, ipsaque miliarium historia eam pectuarum elucidet, atque explanet, una fidelia hunc utrumque parietem dealbabo." This quotation, we hope, will be a sufficient justification for using the above extract as we have done.

inevitable conclusion, that those remedies which arrest inflammation at the commencement, prevent the graver and malignant symptoms, which characterize the last stage of such fevers; and this conclusion was amply borne out by the results of his practice, since bleeding and purging at the beginning were generally successful."* Rush, in his "Defence of Bloodletting," remarks that Dr. Morton describes what he called a putrid fever, which was epidemic and fatal, in the year 1678. Dr. Sydenham, who practised in London at the time, takes no notice of this fever. "The reason of his silence (says Rush) is obvious. By copious bleeding, he prevented the fever of that year from running on to the gangrenous state, while Dr. Morton, by neglecting to bleed, created the supposed putrid fevers which he has described." The importance of this subject will, we hope, be a sufficient apology for our having dwelt on it at some length. We consider it of great importance in a practical point of view to have correct notions on this subject. If we adopt the opinions of those who consider the appearance of petechiæ as at all times denoting debility, and a tendency to putrefaction in the fluids, and on this account to be treated by tonics and stimulants, we will most unquestionably do much injury. From our own experience, and from the testimony of others, we firmly believe that, when occurring early in the fever, they indicate a high grade of disease, which must be combated by active measures of treatment,† and so long as the pulse preserves its strength, we may deplete regardless of their presence.

As to the dissolved state of the blood, if it occurs early in the disease, and the other symptoms do not forbid the use of the lancet, we should proceed as though it did not exist. Rush considered it as indicating a highly inflammatory state of the system. In his history of the yellow fever of 1793, he says, "I paid no regard to the dissolved state of the blood, when it appeared on the first or second day of the disease, but repeated the bleedings afterwards in every case, when the pulse continued to indicate it. It was common (says he) to see sizy blood succeed that which was dissolved."

---

* Armstrong on Typhus, p. 154.

† Doctor Rush, in his account of the yellow fever of 1793, remarks, that "the presence of petechiæ did not deter me from repeated bloodletting, when the pulse retained its fulness or tension." After mentioning instances of its success, he says, "I find precedents in De Haen and Dr. Sydenham in favor of the practice. So far from viewing these eruptions as signs of putrefaction, I considered them as marks of the highest possible inflammatory diathesis. They disappeared in each of the above cases after bleeding.

Cathartics. Cathartics, next to venesection, are, unquestionably, the most important remedies in this fever. Unlike bleeding, however, they are not only admissible, but, in a greater or less degree, are demanded, in every grade and in almost every stage of the disease. The ancient physicians were much in the habit of employing purgatives in fever and other diseases; the number of such articles then in use was comparatively limited, and they were very rough in their operation. Sydenham, in more modern times, carried the practice of purging to a very considerable extent. After his time, however, and previous to the revival of the practice of purging in typhus by Hamilton, cathartics had been in a great measure neglected in the cure of fever; particularly in that under consideration. Brown, in accordance with his belief of the asthenic character of typhus, of course, rejected them; and Cullen placed but little confidence in them, and generally substituted enemata in their stead.

We have said above that Hamilton revived the practice of purging in typhus. This assertion has not been made without due consideration, and only from a conviction that we ought, in matters of science and discovery, as in other things, to "render unto Cæsar the things that are Cæsar's." Hamilton certainly deserves great credit for shaking himself loose from the doctrines of his day; but he has no claims to originality in prescribing purgatives in typhus fever. If we refer to Sydenham, we shall find that he used them freely; and in the very disease now under consideration placed his chief reliance on bleeding and purging for its cure. In his "Essay on the rise of a new Fever," (which is, as was before mentioned, the typhus of the present day,) after recommending the use of purgatives and bleeding, he remarks that, "the method just recommended is the best I ever tried in curing this fever; and if it fails of effectually removing it, at least brings it to intermit, and then it always yields to the bark. But as purging, as it is here directed in order to cure this fever, may perhaps seem detrimental to some persons, I assert from experience, that nothing cools so much and so surely as purging after bleeding." After assigning some reasons for their beneficial effects, he says, "For these reasons, therefore, I hope I may assert, on good grounds, that *the method of cure above delivered, which consists in bleeding and purging, is the most effectual one* to conquer most kinds of fevers;"* and in other passages he enforces the same practice. It will be seen from the above extracts, that

* Wallis's Sydenham, vol. 2, p. 344–5.

nearly a century anterior to the time of Hamilton, Sydenham prescribed purgatives in this disease from the beginning, and recommended them, conjoined with venesection, as the best cure for most kinds of fever.*

Hamilton, it seems, was led to the employment of purgatives by mere accident: he says, "At the time I was appointed physician to the Royal Infirmary, the cure of typhus was thought to consist chiefly in the removal of atony and spasm of the vessels of the surface of the body. For this purpose, among other remedies weak antimonial wine and nauseating medicines were freely given. The state of the stomach and bowels, after the exhibition of an emetic and purgative on the first approach of the attack, was little regarded in the after periods of the fever. An occasional stool was procured by a mild glyster, while a purgative medicine was given with extreme caution. Apprehensions were entertained that the operation of a purgative would rivet the spasm of the extreme vessels, and increase debility, one of the supposed direct causes of death in fever. These apprehensions (continues he) may still bias the practice of many, as they certainly did bias mine, for a long time." An unusually malignant typhus fever, however, breaking out in Edinburgh, in the summer of 1779, and being unable to cure it by the mild antimonials, Hamilton was induced to resort to the *calx antimonii nitrata*. "This antimonial remedy (says he) was not ineffectual; but I remarked that it was beneficial only when it moved the belly. The stools were black and fœtid, and in general copious. On the discharge of these the low delirium, tremors, floccitatio, and subsultus tendinum, which had prevailed, abated in some cases; the tongue, which had been dry and furred, became moister and cleaner, and a feeble creeping pulse acquired a firmer beat. Reflecting afterwards on these cir-

* It has, we think, been too much the custom to overlook the practice of Sydenham, and to consider his great excellence to consist in his unrivalled descriptions of acute diseases. We, however, look upon his writings in a very different light: he certainly deserves great credit for his accurate account of diseases, but we by no means consider it as his highest praise. The improvement he made in the treatment of smallpox is enough to immortalize any one man, and his mode of curing fevers and the phlegmasiæ has been but little improved on even at the present day. There is one striking instance in which his claims to originality of treatment are almost entirely overlooked, and all the credit assigned to Hamilton. I allude to the method of curing St. Vitus Dance. He used identically the same routine of practice in this disease which is followed at the present day upon the authority of Hamilton. Any one may satisfy himself of the truth of this by consulting his works.

cumstances, it occurred to me, as the purgative effect appeared to have been the useful one, that any purgative medicine might be substituted for the calx antimonii nitrata, and that by this substitution, the unnecessary debilitation of an exhausted patient, by vomiting and sweating, might be avoided."

"More extended experience confirmed these conjectures; and I was gradually encouraged to employ purgative medicines early in typhus, and to repeat them in the course of the disease; and after having long and strictly directed my attention to this point of practice, I am now thoroughly persuaded that the full and regular evacuation of the bowels relieves the oppression of the stomach, and mitigates the other symptoms of fever."*

These extracts are interesting and useful, as they give the experience of an accomplished and practical physician; and as showing the gradual dawning of light on a mind clouded and fettered by the scholastic doctrines of the day.

Huxham, however, anterior to the time of Hamilton, had remarked the great and surprising relief experienced from the free discharge of dark bilious matter from the bowels. In his essay on "malignant putrid fever," he remarks, that "unquestionably the bilious principle is too greatly predominant in all putrid, malignant, and petechial fevers. The gall bladder, and biliary ducts, are always found full of black or green bile in those that die of pestilential diseases, and so is the stomach, duodenum, &c. Now, (continues he,) if this putrid bile is not carried off, it grows more and more corrupt, and causes vast anxiety, sickness at stomach, pain, &c.; and, being reabsorbed into the blood, creates infinite evils, greatly irritates the *genus nervosum*, destroys the *crasis* of the blood, and turns the lymph into a corrosive ichor. When, therefore, there are signs of its being redundant, it should be forthwith discharged by vomit or stool, as nature points out. I have many times, with the greatest pleasure, in these putrid fevers, seen an amazing change for the better immediately succeed a fit of vomiting, and a stool or two, when an inexpressible anxiety, load on the *præcordia*, perpetual sickness, *eructation*, and *singultus*, had preceded. The extreme foulness of the tongue, and load at the stomach, with a loathsome bitter taste, and a horrible offensive stinking breath, and eructations, show the condition of the stomach; and the abominably fœtid, black, bilious stools, the necessity and advantage of that discharge."† This extract

* Hamilton on Purgatives, p. 29. † Huxham on Fevers, p. 94.

from Huxham, though a long one, is, we conceive, highly valuable, inasmuch as it informs us of the state of the gall bladder, biliary ducts, stomach, and duodenum, after death from this fever, and mentions the effect which a retention and reabsorption of this dark bile has upon the genus nervosum. The first points out the indispensable necessity there is for cathartics, and the last teaches us that many of those nervous symptoms incident to the disease, and which have been supposed to proceed from debility, and treated as such, are to be attributed to a retention of this black bile, and can only be relieved by its evacuation.

Even among those, however, of the present day, who agree upon the utility of free purgation in this fever, there is much diversity of opinion as to the kind of cathartics which are best adapted for this purpose. While some proscribe the use of calomel and all other active purges, and rely on laxatives almost entirely to effect the evacuation of the bowels, there are others who look upon it as the sheet anchor of hope, not only in this, but in most other fevers, and prescribe it with a degree of boldness and daring perfectly astonishing to those who are accustomed to administer it only in five or ten grain doses. Either practice may be carried to extremes, but of the two, in severe cases of fever, we should greatly prefer the bold exhibition of active remedies to the milk and water practice of those who would altogether exclude such means from the treatment of fever. We have always been the steady and constant friend of the use of calomel in fever; but in ordinary cases we believe its moderate to be just as beneficial as its extravagant exhibition, with this advantage, that there is less risk of producing that painful, disgusting, and sometimes fatal affection of the mouth, a salivation. This Hercules of the materia medica is not to be rashly dealt with, without often leaving behind the most lamentable and distressing consequences of its maladministration. When judiciously used, however, it may truly be said to be an invaluable remedy; there is no article in the whole materia medica which so effectually discharges that dark bilious matter, which affords so much relief in fever. It is customary to combine it with some other cathartic, and we know of none better than jalap; ten grains of each for an adult, administered every two hours, until the bowels are freely evacuated, constitutes as effectual a purge as can be used. This combination was much employed by Dr. Rush in the yellow fever of 1793, and it was then called a dose for a horse; what would they who so called it have thought of sixty grains of calomel as a common dose? Jalap, however,

to some stomachs is so exceedingly nauseating and offensive, that we are obliged to substitute something in its stead; this may be done by adding the same amount of scammony to the calomel, and administering it in the same way. Scammony has hitherto been but little used on account of its supposed drastic and harsh operation, but from repeated experience we can declare that it is less so than jalap, and is equally effectual in evacuating dark bilious matter. Another mode that we have found very effectual in evacuating the bowels, and lowering the action of the heart and arteries, is to administer calomel alone, and some time afterwards give a strong infusion of senna, with either Epsom or Glauber salts. This generally operates most copiously, the discharges being very thin; it is, therefore, only suited to the beginning of the disease, when the strength is but little impaired, and to those of strong constitutions; it is very apt to prostrate the thin and delicate too much. The cathartics are to be repeated day after day, until the fever is subdued; when, however, it has continued for some time, and the patient is much weakened, we generally combine aloes with the calomel and jalap, to render the discharges more consistent. The following is the prescription in general use:

Calomel,	3ss.	M. D. in pil: xxx.
Jalap,	3i.	
Aloes,	3i.	

Four or five of these pills given, and repeated according to circumstances, will generally operate freely enough. The discharges produced by this combination, are much more consistent, and, of course, less debilitating, than those by calomel and jalap alone. If, at any time during the exhibition of these pills, the mouth should become sore, the calomel must for a while be discontinued, and the same quantity of aloes and jalap be given alone; this combination is the very best substitute for calomel that we are acquainted with. When the patient is fairly convalescent, it is necessary to pay much attention to his bowels, if they should not be sufficiently open; then two or three of the above mentioned pills ought to be given. There are, however, other articles, which, for this latter purpose, answer very well, such as castor oil, magnesia, &c.

The above practice is suited to those cases in which the bowels are easily operated on. Cases, however, of great torpor sometimes occur, in which it is impossible to obtain an operation by the usual doses. In such, it is idle to limit ourselves to a certain number of grains; we must exhibit cathartics in doses *sufficiently large to purge*, for without this the

patient will die; we believe that the safety of the patient in fever, depends upon a continued evacuation of bile from the bowels, and keeping the action of the heart and arteries in proper control by the other antiphlogistic means; we must then judge of the necessity for an increase of the dose, by the effect produced, and not by the number of grains given. Fortunately cases of such extreme torpor of the bowels are rare; but when they do occur, they are only to be managed by the most bold and intrepid exhibition of medicines; in the language of Hippocrates, "ad extremos morbos, extrema remedia sunt exquisite optima." The next remedy in point of importance is

Cold Water. Cold water was much used, both internally and externally in fever, by the Greek and Roman physicians, some of whom relied upon it exclusively as a means of cure. We find mentioned, by both Celsus and Galen, that Petro, a physician who flourished a considerable time after the death of Hippocrates, attempted to cure fever by copious draughts of cold water. It appears from the description of his method, given by Celsus, that in cases of fever, he first caused the patient to be covered with a good deal of clothing, in order that he might excite in him great heat and thirst, and then commenced the profuse administration of cold water.*

The use of cold bath was introduced at Rome during the the reign of what was called the methodic sect. From its having been first successfully used in the case of the emperor Augustus, whose complaint had baffled all the usual applications, it acquired great reputation, and was subsequently used with considerable boldness by some of the Greek and Roman physicians. The Arabian physicians, also, employed it much, both internally and externally, in pestilential diseases. The practice, however, was, in progress of time, lost. During the last century its use was revived by doctors Jackson and Wright.† The following is Dr. Jackson's account of the

---

* Liquidem apud antiquos quosque ante Herophilum at Erasistratum, maxime post Hippocratem fuit Petro quidem, qui febricitantem hominem ubi acceperat, multis vestimentis operiebat, ut simul calorem ingentem sitimque excitant. Deinde ubi paulum remitti ceperat febris, aquam frigidum potui dabat." Celsus Lib. iii. c. g.

† We find it asserted in vol. i. p. 89 of Johnson's valuable work on Tropical Climates, that "it has been practised in the Bengal remittent, time immemorially, among the natives themselves, many a century before a Jackson, a Wright, or a Currie thought or wrote on the subject." To prove this, he introduces an extract from the Oriental Field Sports, by captain Williamson, which we will copy here. "We must, however, (says captain Williamson,) do the natives the justice to allow, that the refrigera-

circumstances which led him to the employment of cold bathing. He says, that "the first hints of this practice were accidental, and arose from a conversation I had with the master of the vessel in which I went passenger to the West Indies. This person commanded a transport in the war of 1756, and was present at the siege of Havana. As he was talking one day of the state of the fleet, he mentioned accidentally, that some men were sent aboard of his ship ill of fevers; several of whom, he observed, jumped into the sea during the delirium which attended the paroxysms of the disease. Some of them, as might be expected, were drowned; but the most part of those who were recovered from the waves appeared to be greatly benefited by the ducking. The fact, which, from the veracity of the man, I thought I could depend upon, struck me strongly, and I resolved in my own mind, to bring it to the test of experiment as soon as an opportunity should offer. Neither was it long after my arrival in Jamaica, that I had occasion to visit a sailor whose situation seemed to justify such a trial. The poor man was aboard of a ship, which lay at anchor about a mile from the shore. He had been ill two days; the delirium ran high; his eyes were red and inflamed; his respiration was hurried; he was anxious and restless in a high degree, while, together with those marks of excitement, he was occasionally languid and disposed to faint. His skin being dirty, furnished an ostensible excuse for trying this remedy. But it was previously thought proper to draw some blood from the arm; which being done, some buckets of salt water were dashed on the shoulders. He was now laid in bed; a copious sweat ensued, succeeded by a distinct remission and a total change in the nature of the symptoms." After relating some other instances of its astonishing efficacy, he says, "I shall only add, that I have tried the remedy, in various situations, always with safety, generally with astonishing success; so that I cannot forbear recommending it even at an early period, in

---

ting principle lately adopted by some of our leading physicians, owes its origin solely to the *ancient practice* of the Brahmins, or Hindoo priests, of whom the generality affect to be deeply skilled in pharmacy." And he then adds, "I believe that, if taken in time, few fevers would be found to degenerate into typhus, and that very seldom any determination towards the liver, in acute cases, would occur, were the refrigerating course to be adopted. Often (says he) have I known my servants, when attacked with fever, to *drink cold water* in abundance, and to apply *wetted cloths to their head*, with great success. The former has generally lowered the pulse considerably by throwing out a strong perspiration, while the latter has given immediate local relief."

the fevers of the West Indies."* In the year 1777, Dr. William Wright, of Jamaica, published an account of the salutary effect of ablution with cold water upon himself and others, while laboring under severe fever. This narrative of Dr. Wright excited much interest and drew the attention of many distinguished men to the subject. Among others, Dr. Jas. Currie, of Liverpool, entered into it with much zeal, and soon after enjoyed extensive opportunities of testing its efficacy. On the ninth of December a contagious fever made its appearance in the Liverpool Infirmary, and spread itself rapidly. In this fever he, for the first time, commenced the use of cold ablution, and out of seven cases treated by it not one died; encouraged by his success in this first trial of the efficacy of cold water, he continued to use it freely, both in hospital and private practice, with extraordinary success; and some time after published his admirable work on the use of cold water, in which are contained the results of his extensive experience with it, and the rules which should guide us in its use.

No one can peruse this volume without being convinced, that cold water, when properly applied, is a most important remedy in fever. Its utility is not confined to typhus; it is equally serviceable in all fevers attended with increase of heat and arterial action. Its effect upon the pulse is astonishing in many cases. We have often known the mere bathing the arms and hands of a febrile patient reduce the action of the pulse ten or fifteen beats in the minute; and if this partial application of cold water has such an effect on the action of the heart, how much greater must be the effect of a cold bath? We have many instances on record of its calming at once the most furious delirium; persons in such a situation have often jumped overboard a vessel into the sea, and been taken up perfectly calm and rational, and with an almost complete extinguishment of the fever. With the many strong instances recorded in various works, of its remarkable efficacy in curing fever, it is justly a matter of surprize, that physicians so seldom call its great powers into requisition. It exercises a more immediate control over the action of the heart than bloodletting. Dr. Currie mentions a striking instance of the effect of cool air in reducing the pulse. "In the month of May, 1801, (says he,) I was desired to visit a patient ill of fever in Sparling street. I found him in the tenth or eleventh day of the disease, delirious and restless; the surface of the body dry, and his heat 104° of Fahrenheit. The room was close, and I desired the only window in it to

* Jackson on Fevers.

be opened. The wind from the northwest blew directly into this window, and the bed being situated between it and the chimney, a pretty brisk stream of air passed over it. The patient had just thrown off a considerable part of his bed clothes, and was exposed naked to the breeze. I sat by him, with my finger on his pulse, watching the effect. In a little time the pulse fell from 120 to 114 in the minute; he became more tranquil, and soon afterwards he sank into a quiet sleep, in which he remained when the water for affusion was prepared; of course, we did not disturb him;"* he remained exposed to this cold air until morning, when his pulse was found to be about 100, and his heat 101.

Dr. Rush, in his history of the yellow fever of 1793, relates a similar case to the above. "Dr. Griffits (says he) furnished a remarkable instance of the influence of cool air on the fever. Upon my visiting him, on the morning of the eighth of October, I found his pulse so full and tense as to indicate bleeding; but after sitting a few minutes by his bed side, I perceived that the windows of his room had been shut in the night by his nurse on account of the coldness of the night air. I desired that they might be opened. In ten minutes afterwards the doctor's pulse became so much slower and weaker that I advised the postponement of the bleeding, and recommended a purge instead of it;" and in the next page he remarks, that "cold water, when applied to the feet, as certainly reduces the pulse in force and frequency, as warm water applied in the same way produces contrary effects upon it. In an experiment which was made at my request, by one of my pupils, by placing his feet in cold pump water for a few minutes, the pulse was reduced twenty-four strokes in a minute, and became so small as hardly to be perceptible." These facts teach us, that it is the cold alone which is serviceable, since it has the same effect whether applied in the shape of water or air; and they also teach us the powerful influence it has over the actien of the heart, and the great value of its proper use in the cure of fever.

Cold water may be used either internally or externally, or in both ways. It has been already mentioned that Petro relied entirely on copious drenching with cold water for the cure of fever; and about the middle of the last century (1752) a treatise was published on the internal use of cold water, under the title of "Febrifugum Magnum," by Dr. Hancock London. The most effectual way, however, to derive full benefit from the action of cold, is to use it in both

* Medical Reports, p. 259.

ways; the same principle which would induce us to resort to affusion, would also suggest its internal administration. The latter is generally so consonant with the patient's inclinations, that there is usually no difficulty in its application, and, therefore, it should always be recommended; the affusion, however, is looked upon by society as disagreeable if not hazardous, and hence, in proposing such a remedy, we have generally to encounter much prejudice. In severe cases, peremptorily requiring the use of active means, we should disregard this feeling; but if otherwise, we may be satisfied with its partial external application. We can always have the feet, arms, and hands bathed in cold water, and cloths dipped in the same applied to the stomach and head. This affords very great relief, and ought never to be omitted.

But cold water is by no means to be used indiscriminately in every case of fever; neither is it to be used in all stages of any fever; the rules which Currie has laid down on this subject are excellent, and cannot be followed too closely. If we obey strictly his directions, we will always be prevented from misapplying or doing injury by its use. He gives separate rules for the external and internal use of cold water; but as its effect, except in degree, is the same when used either way, so one set of rules will answer as a guide for both. His first general rule is, that "It may be used (either internally or externally) *when there is no sense of chillness present, when the heat of the surface is steadily above what is natural, and when there is no general or profuse perspiration.*" We will now give the substance of the particular rules he has laid down on this subject. 1st. "Cold water is not to be used either internally or externally in the cold stage of the paroxysm of fever, however urgent the thirst;" taken at such times it increases the chillness and produces great weakness of the pulse, and if used to any extent might cause the death of the patient. 2d. When the hot stage is fairly formed, and the surface is dry and burning, cold water may be used both ways with the utmost freedom; frequent draughts of cold liquid, and its external application, under such circumstances, are highly grateful; they diminish very much the heat of the body, and lessen considerably the volume and frequency of the pulse. 3d. "It is also necessary to abstain from the use of cold water when the body is under profuse perspiration, and this caution is more important in proportion to the continuance of this perspiration."

We will finish what we have to say on the use of cold water, by a few remarks on its *modus operandi* in curing fever. And in the very commencement we cannot help expressing

our surprize, that cold should ever have been considered as a stimulant. If it be such, then is Currie's general rule for the use of cold water an absurdity; for a stimulant would do no injury during the presence of a chill, and would be obviously prejudicial in the heat and exacerbation of fever. However wild and imaginative Brown may have been in many of his notions, his opinion that cold can never act as a stimulant is unquestionably correct. It is so plain a matter that it is unnecessary to argue much about it. We will only state a few positions, the truth of which none can deny. In the first place, if we take a person in health and immerse him in cold water, and then feel his pulse, we will invariably find it small and weak, and it will continue so as long as he remains in the water. 2d. If we immerse a person laboring under a chill, when the pulse is already weak, it will be rendered much weaker and has sometimes been extinguished. 3d. Currie relates many cases of fever, in which the application of cold greatly reduced the action of the heart; in one case, in a very short time, the pulse was diminished eight beats in the minute; and in the case mentioned by Rush, the pulse was lessened twenty-four strokes in a minute, by the immersion of the feet in pump water. These facts unquestionably prove that cold has none of the properties of a stimulant, since it weakens the pulse in a state of health, weakens it still more when already weak, as in a chill, and lessens very much its volume and frequency when in a state of excitement, as in fever. "But," say the advocates for the stimulant property of cold, "if you take a person out of the cold bath, his pulse rises, his skin becomes warm, and his cheeks flushed, and hence we argue that it stimulates the system." In answer to this, we remark, that one might just as well contend that brandy was sedative in its character, because a man that had been intoxicated by it was rendered sober by its withdrawal, as to argue that cold is a stimulant, because the heat reacted when removed from the sphere of its influence. So long as we keep a person in the cold bath, so long will his pulse continue small and weak; but if we remove him from the bath, then his pulse rises; and from what cause? Surely not from the cold, because, having been withdrawn, it has, of course, ceased to operate; but from the increased accumulation of blood about the right side of the heart, which is the necessary and inevitable result of its weakened action, which last is produced by the cold application. We have then a sufficient cause for this increased action of the heart and flushing of the cheeks, in the presence of an unusual quantity of the heart's natural stimulus, without attributing it

to cold, which, as we said above, has a directly contrary effect, so long as its application is kept up. These are some of our reasons for considering cold not to be a stimulant. The same facts or reasons, however, which prove it not to be stimulating in its properties, prove it to be sedative in its character. It is from its operating in this way, that we can readily account for its extraordinary effect in fever. It is by diminishing suddenly and very greatly the action of the heart, that a cold bath will calm, almost in an instant, the most raging and unmanageable delirium.

Blisters. Much variety of opinion exists as to the utility of blisters in fever. While some recommend them early in the disease,* others confine their application to its advanced stage, and some there are who reject them in toto;† and there are others still, who think them only beneficial when applied to relieve some topical affection. We are among the latter number. In cases of fever attended with inflammation of some important part, we have often witnessed the most remarkably good effects from their use, and never fail to apply them under such circumstances. We entirely agree with those who deprecate their early application in continued fever, not characterized by some local affection, and even in such cases we should always prefer using free depletion before resorting to them. When applied without the presence of inflammation, they are decidedly injurious; they increase the fever and irritation of the patient, and often prove a source of much torment to him. The language of Fordyce on this subject is exceedingly judicious, and ought to have great weight with all those who believe that experience is the best teacher, particularly in matters relating to medicine. Fordyce was probably as conversant with fever as any man of his day, and therefore when he speaks we should listen with attention. He says, that "Whether exciting inflammation has or has not the same effect in a regular continued fever, which it has in health, can only be known by making the application to the body of a person affected with regular continued fever. As far as the author's experience goes, when

---

* Lind remarks, that "In a moderate infectious fever, where the source of infection is not very violent, if twenty patients be blistered, sixteen will next morning be entirely free from headache, heat, pain, and fever."

† Dr. Moore, in his "Medical Sketches," observes, that "Notwithstanding my having watched the effect of blisters with all the attention I am capable of, and formerly with a strong prepossession in their favor, I cannot assert that I ever knew vesications of any use in this disease, (i.e. typhus;) but I have frequently seen the patient teazed by their irritating quality, without their seeming to have any other effect."

any stimulus has been employed so as to produce inflammation, when the patient has become weak towards the end of a continued fever, the only difference which has occurred has been, that phlegmonous inflammation has not produced hardness, fullness, and strength of the pulse, but both phlegmonous inflammation and inflammation of the skin have occasioned greater frequency of the pulse, have rendered it weaker and smaller, and as in health have prevented sleep, and the patient's taking the same quantity of nourishment, and have depressed and deranged the whole system."* Huxham, an old author, and on this account many may think his opinions not entitled to much weight, though we are free to confess that we think not the less of him for that reason, has some excellent remarks on this subject. "What I have said (observes he) of volatile alcalious salts, leads to a reflection on the promiscuous use of blisters in these fevers, which by some are deemed the only *anchor of hope* in such dangerous cases; but I think they are many times too hastily and improperly applied, especially in the beginning, when the fever runs high, and doth not demand a farther *stimulant;* for the action of cantharides is not confined to the skin, but affects the whole nervous and vascular system: now when the irritations and vibrations are already too great, as frequently happens in the beginning of such fevers, they are very injudiciously applied. It is true, indeed, (continues he,) nature may sometimes want a *spur*, nay, often doth so, particularly towards the decline of these fevers, when the solids grow torpid, the circulation languid, the spirits affete, and the sick comatose; but in the above circumstances I have very many times seen very pernicious effects attend their too early application, as obstinate *pervigilium*, *delirium*, suppression of urine, *tremors*, *subsultus*, &c."† We find from this extract, that, though Huxham disapproves of the use of blisters in the early stage of fever, yet he acknowledges the occasional necessity for their use in the last; yet even under the circumstances he has mentioned, we should greatly prefer the use of sinapisms, because they are much more powerful and more immediate in their effect, and are not so apt to produce a troublesome and tormenting sore; this last effect we have often known to occasion much fretfulness and pain to the patient during the whole stage of convalescence. Another objection to the use of blisters in the last stage of this fever, when the debility is extreme, is the probability of their producing gangrene in the part to which they are applied. Sir John Pringle, Clark,

* Fordyce on Fever, p. 270. † Essay on Malignant Putrid Fevers.

and Lind, and many others, bear testimony to this effect of blisters, when applied to patients under such circumstances.

From the opinions of the distinguished physicians which we have quoted, and from our own experience, we are justified in the conclusion that blisters are inapplicable in the early stage of fever, and that they are rather of equivocal benefit when applied in its advanced stages; used, however, at any stage to relieve topical inflammation, they are of eminent service; they always do most good, however, when resorted to after the pulse has been reduced by proper depletion, and this, indeed, ought always to be done.

When blisters are used to relieve local inflammation, they should be applied immediately over the part affected, or if this be impracticable, then as near to it as possible. Blisters frequently produce a very unpleasant affection of the bladder, called strangury; this can be most generally relieved by drinking freely of flax seed tea, barley water, &c.; if this should fail, we can recommend, as an infallible remedy, the injection of five, ten, or twenty grains of camphor, suspended in about a gill of mucilage of gum arabic.

Bark and Wine. These two remedies were formerly much relied on for the cure of typhus fever, and even at the present day there are many who adhere to this mode of treating the disease. It is, however, one of the relics of exploded error which will soon cease to exist, and is only to be found in those who are fettered by educational prejudices, which they are unwilling or unable to break. If this disease be sthenic in its character, then it necessarily follows, that tonics and stimulants are not the proper remedies for its cure. We believe that bark is never necessary in this fever, unless when it changes to an intermittent type, and here it may be given with excellent effect. We suspect strongly that when bark cures this or any other disease of excitement, it does so by acting as a purge; for we know that when given in any quantity it very frequently acts in that way. Bruce says that bark cured the bilious fevers of Massuah when it operated as a purge. Stimulants we reject not in toto, but almost entirely in the cure of fever we feel the most unrelenting prejudice against them; for it has fallen to our lot to see many cases in which irreparable injury was produced by their improper and unreasonable exhibition.* We have frequently known patients stimulated into a delirium,

* Stimulants are injurious in proportion to the violence of the fever, and hence they are so destructive in the high grades of the autumnal fevers of this country. Rush deprecated, with all his earnestness and enthusiasm,

and sometimes into apoplexy; and we have known them rescued from the latter condition by the supervention of a free bilious diarrhœa, a most convincing proof that the supposed debility of the patient, to counteract which stimulants were resorted to, did not demand such treatment. It is that bugbear debility which frightens us into too early a resort to remedies of such pernicious tendency; and until we can divest ourselves of the fears arising from this delusive source, we will often do wrong by administering them at an improper period of the disease.

However strongly we may be opposed to stimulants as constituting a necessary part of the general treatment of fevers, we yet think them highly important in their proper place, and of indispensable utility under certain circumstances. When a patient is very much prostrated from the long continuance of fever, we may often unite, with great advantage, some stimulant to the means used for subduing the fever. Camphor and wine are the two most frequently resorted to. We greatly prefer the latter to any other kind of stimulant; the camphor, when used in any quantity, almost always producing a most unpleasant delirium. Of the different wines, Madeira is much the best. Armstrong says, that in the advanced stages of typhus he is in the habit of mixing milk with the wine, and under this form he thinks it makes an excellent drink.

It will be seen by the above remarks, that we are decidedly opposed to stimulants, in every stage of the fever, except under the circumstances mentioned. The majority of cases of typhus, when treated properly in the primary stages, will not often require the use of stimulants in the last. Hamilton, some years after he commenced the purgative plan of treatment, says, "I cannot, however, omit remarking, that for some years past I find wine less necessary in fevers than I formerly thought it was;" and every unprejudiced physician, who properly employs depletory measures in the beginning of fever, will acknowledge that stimulants are but rarely necessary in the last stage.

Of the Diet and Drinks. We have chosen to consider the subject of regimen under a separate head, because we think that a proper regulation of it has considerable influence

---

their exhibition in yellow fever, and some of the older authors also mention their fatal effects in fevers. Thus Shenkins, in speaking of the famous Hungarian fever, which prevailed so extensively in Europe about the middle of the sixteenth century, says, "omnes qui vini potione non abstinuerunt, interiere, adeo ut summa spes salvationis in viui abstinentia collocata videtur."

over the state and progress of the disease. From much attention to this subject we are convinced that fever is often kept up and protracted by improper articles of diet; the friends of the patient usually betray such excessive anxiety upon this subject, are so much afraid of his dying from mere inanition, and are generally so importunate in their intreaties for more nourishment, and so much dissatisfied with a refusal, that few physicians have fortitude enough to enforce the dietetic plan as rigidly as they could wish, and as would best comport with the interests of their patients. The rigid enforcement of a very low diet in fever is, we think, the only respect in which Broussais' practice ought to be followed.

The ancient physicians were well aware of the great importance of a suitable diet in fever, and accordingly paid much attention to it. Hippocrates permitted the patient to drink freely of cooling beverages, and gave but little nourishment during the first days of the disease. Erasistratus, who lived about two hundred years after Hippocrates, being of opinion that fever proceeded from too great plethora, enjoined a general and rigid abstinence upon his patients. Asclepiades and his followers also prescribed abstinence, but limited its duration to three days; he permitted the patient neither to eat nor drink during this time, and says that in this way the fever was cured *tuto celeriter et jucunde.* The practice of limiting the abstinence strictly to three days was distinguished by the name of diatrition, and those who followed it by the appellation of diatritarii. We find, therefore, from what has been mentioned, that the ancient physicians thought a proper diet a matter of considerable importance in fever.

The regimen during the fever should be of the lightest and most abstemious character. We do not think that we can well err by the utmost strictness on this point; we should literally starve the fever. Animal food should be proscribed as pernicious in the extreme. A cup of barley water, or of weak tea or coffee, twice a day, with a hard water cracker, if the patient should desire it, is generally sufficient for him; he should also be allowed to drink freely of cooling beverages, such as lemonade, apple water, rice water, currant jelly water, toast and water, balm tea, and cold water; here is variety enough to satisfy the most wayward and capricious appetite, and which can be indulged in freely without the fear of injury.

But it is not during the febrile state alone, that we should be particular about the diet of the patient; much attention to it is also necessary during the stage of convalescence. The patient should be permitted to return gradually to his

former mode of living, commencing with the lightest and most digestible articles of diet, such as arrow root, sago, tapioca, &c. Animal food ought not to be allowed until he is able to walk about; a too early use of the latter is often the cause of severe relapses, and we are earnestly cautioned against it by most writers on fevers. Thus Huxham, in his account of the malignant fever which prevailed at Plymouth in the year 1740, remarks, that "If any one made use of a flesh or a fish diet, before he had been very well purged, and his recovery confirmed, he infallibly indulged himself herein at the utmost danger of his life;" and Dr. Poissonnier, in his work on the maladies of seamen, says, that "the physicians of Brest have observed, that the relapses in the malignant fevers which prevailed in their naval hospitals, were as much the effect of a fault in the diet of the sick, as of the contagious air to which they were exposed, and that as many patients perished from this cause as from the original fever. For this reason light soups, with leguminous vegetables in them, panada, rice, seasoned with cinnamon, fresh eggs, &c., are all they should be permitted to eat. The use of flesh should be forbidden for many days after the entire cure of the disorder."* In addition to the articles mentioned in the latter part of this quotation, the patient may be allowed to eat moderately of ripe fruit; the pulp of roasted apples is very good; milk and bread may also be allowed him. There is one circumstance, however, which ought always to be attended to during convalescence, which is, to keep the bowels open; if this does not happen spontaneously, it must be effected by the use of laxatives; this is highly important, as it lessens greatly the danger of a relapse. Armstrong says, that he has seldom seen relapses in inflammatory diseases, when the bowels have been kept regular, and the antiphlogistic diet observed.

We have now finished what we have to say on the treatment of this form of typhus, and, from a review of it, it will appear, that all the remedies mentioned concur in the same tendency, i. e. to reduce the action of the heart and arteries, and to remove local inflammation when present. This course of treatment is the necessary and unavoidable result of the opinions we have adopted in relation to the pathology of typhus; if these are correct, if the disease is really one of excitement, and often of inflammation of some vital organ, then it follows, that the antiphlogistic plan of treatment, differently modified according to the grade of the fever, is the

* Maladies de Gens de Mer. vol. 1, p. 345.

proper one. Whether, however, the views of this disease, inculcated by the great Sydenham, proclaimed and defended in modern times by Armstrong and others, and embraced by the humble author of this essay, be true or not, time and the increasing light of the science must decide. The great object in our profession certainly is, to ascertain the true character of disease. If our pathological views are correct, then the practice legitimately deducible therefrom must be correct. It is one of the maxims of the great father of medicine, that he who knows the nature of a disease knows how to cure it, or, as Celsus elegantly expresses it, "Estimatio causæ sæpe solvit morbum;" and all our endeavors should be directed to this point. Until this be accomplished, our practice must partake somewhat of empiricism.

Treatment of Congestive Typhus. It has been already mentioned, that in this form of fever, the system does not react from the first stage of oppression, but continues in this state, in a greater or less degree, according to the violence of the cause producing it. In some cases the prostration is complete; in others, there is a partial and transitory reaction. From the appearances of great debility which present themselves in the commencement of congestive typhus, it has been customary to treat it by the administration of cordials and stimulants; this treatment would be proper enough if the debility was real; but if it is only apparent, if it be the result of that change in the circulation which has been noticed in a former part of this essay, and that (in the language of Armstrong) "it is no more to be accounted positive exhaustion than the loss of muscular power, which precedes and accompanies the treating of genuine apoplexy, to which, in fact, this modification of typhus has often a most forcible resemblance;" then it demands a different treatment. If, then, cordials and stimulants are not to be relied on for the cure of this form of typhus, (though we acknowledge that they are occasionally very useful adjuvants to the other means,) what is the proper plan of treatment? We answer, that our first endeavor should be to remove some portion of that blood, which is, (if we may use the expression,) suffocating the heart's action, by abstracting blood from the system. Under such circumstances we frequently succeed in relieving the heart, in some measure, of its overwhelming load of blood, and, as a necessary consequence of this, raising the pulse; this appears very paradoxical, but it is nevertheless true. Sydenham gives a remarkable instance of this effect of bleeding upon the pulse. In the case of a young man, whose skin was so cool that he could not persuade the attendants

he had a fever, and who appeared to be almost expiring, he drew blood freely, with the effect of raising the pulse to such a degree, that it required three or four subsequent bleedings to subdue it: bleeding, however, does not always have this effect; it sometimes weakens instead of raising the pulse. Its producing or not this latter effect is the test of its utility. If the pulse becomes more free and full under the loss of blood, then we may be certain that it is doing good; if, on the other hand, it renders it more feeble and weak, we may be equally assured that it is doing injury. We should therefore always keep our finger on the pulse, and be guided in the quantity to be drawn, by its effect on the beat of the artery; if it should become more full and expanded, we may suffer it to flow; if the reverse, it should be arrested immediately. It is often, however, extremely difficult to draw blood in congestive fever; "the acting of the heart (says Armstrong) is often so much overpowered in the first instance, that the blood merely trickles, or rather oozes, from the punctured vessel, for a considerable time, being much darker and thicker than natural; yet when a few ounces have been drawn, it usually flows with freedom, and becomes finally of a brighter color. Occasionally I have stood over a patient nearly half an hour before a stream of blood could be obtained from a vein, but at last it gushed out in a full current, and was not as easily restrained as in ordinary cases. Many a life (continues he) might be lost by binding up the arm too hastily, and, therefore, the operator should persevere, until he knows whether enough blood can be obtained." If we cannot, however, procure blood from a vein, we must resort to arteriotomy.

The manner of drawing the blood is a matter of some importance; it should not be abstracted suddenly and by a large orifice, but gradually;* by proceeding in this way the heart

---

* Dr. Rush forcibly illustrates the propriety of gradually abstracting blood, in certain states of malignant fever, by comparing the system to "a man struggling beneath a load of two hundred weight, who is able to lift but one hundred and seventy-five. In order to assist him (says Rush) it will be to no purpose to attempt to infuse additional vigor into his muscles by the use of a whip, or of strong drink. Every exertion will serve only to waste his strength. In this situation (supposing it impossible to divide the weight which confines him to the ground) let the pockets of this man be emptied of their contents, and let him be stripped of so much of his clothing as to reduce his weight five and twenty or thirty pounds. In this situation he will rise from the ground; but if the weights be abstracted suddenly, while he is in the act of exertion, he will rise with a spring that will endanger a second fall, and probably produce a temporary convulsion in his system. By abstracting the weights from his body more gradually, he will

much more certainly recovers its power. When the action of the heart and arteries have become more free, we ought then to arrest the flow of blood, as any further loss might again render this action weak, and place the patient in a worse situation than he was before the bleeding. "When both the pulse and the general circulation become manifestly freer, (after bleeding,) with a warm moist skin, tepid diluents should be the only beverage recommended; yet, when it still remains oppressed, and the tide of the circulation does not return to the surface, and more especially if blood has been freely drawn, some wine with warm water should be occasionally exhibited, and the patient speedily immersed in a bath strongly impregnated with salt, and at least about the temperature of 100° Fahrenheit's scale. He should remain in the bath till his skin becomes warm, and, on being removed, it should be well rubbed all over with hot flannels, and he ought then to be laid in an aired bed, with bottles of warm water at his feet. This plan, together with tepid wine and water occasionally, will often promote a flow of blood towards the skin, and relieve the viscera from congestion."*

But we are not to rely solely on bleeding, the bath, &c. in the cure of congestive fever. After bleeding we should immediately order large stimulating enemata, that the bowels may, if possible, be at once evacuated; and then commence the use of cathartics. Among them calomel is beyond all comparison the best; this given alone, or in combination with jalap, in doses sufficient to act freely on the bowels, will often prove of immense utility. One of the first triumphs of the calomel and jalap practice, instituted by the great Rush in the yellow fever of 1793, was the recovery of an apparently hopeless and desperate case of congestive fever. "The patient (says he) had passed twelve hours, before I began to give him this medicine, without a pulse, and with a cold sweat on all his limbs. His relations had given him over, and one of his neighbors complained to me of my neglecting to advise them to make immediate preparation for his funeral. But in this situation I did not despair of his recovery. Dr. Mitchell's account of the effect of purging in raising the pulse, excited a hope that he might be saved, provided his bowels could be opened. I now committed the exhibition of the purging medicine to Mr. Stall, one of my pupils, who mixed it and gave it with his own hands, three or four times

---

rise by degrees from the ground, and the system will accommodate itself in such a manner to the diminution of its pressure, as to resume its erect form, &c."

* Armstrong on Typhus.

a day. At length it operated and produced two copious fetid stools. His pulse rose immediately afterwards, and an universal moisture on his skin succeeded the cold sweat on his limbs. In a few days (continues he) he was out of danger, and soon afterwards appeared in the streets in good health, as the first fruits of the efficacy of mercurial purges in yellow fever." We have copied the whole of this case, because of its very instructive and interesting character. It evinces in a striking degree the effect evacuations from the bowels have in raising the pulse, and it should also teach that no case, however bad in appearance, should be abandoned as incurable: our motto indeed should be *nil desperandum*.

The bowels, in congestive fever, are often extremely torpid, and require the most powerful doses to rouse them to action. This is one of the cases in which we should disregard the injunctions of our materia medicas, and exhibit medicine in doses commensurate with the violence and obstinacy of the disease.

Armstrong has great confidence in the salivatory effects of calomel. We must confess that we believe it never does good in this way; the calomel, before it affects the mouth, has already won the victory over the disease. The reason why salivation has been thought to put an end to fever, is the generally simultaneous appearance of ptyalism and the cessation of the fever; but we are fully convinced that the former is the result of the latter, and not that the latter is produced by the former. Salivation, therefore, may generally be considered as a good sign, as it is a proof that the fever is either entirely subdued or very much on the wane.

Our great confidence, therefore, in calomel is from its superior efficacy in evacuating dark or green matter from the bowels; and in this only we believe consists its beneficial effect in fever.

The only local remedy which we have found very useful in cases of congestive fever, is the application of mustard poultices or sinapisms to the wrists, ancles, and pit of the stomach. When the surface of the body is cool and the pulse very weak and low, these sometimes produce an excellent effect; they are, particularly in such cases, greatly preferable to blisters.

Causes of Typhus Fever. We come now to a consideration of the causes of typhus. This is a subject on which great diversity of opinion exists even at the present day. While some are of opinion that it may arise from the putrefaction of animal matter, or from human effluvia, the result of crowding healthy persons into confined and ill ventilated places; others contend that it arises exclusively from, and is propagated by, a specific con-

tagion; and there are others still who deny to it any such property, and consider it merely as a variety of the common remittent and continued fever, and, of course, as arising from the same causes.

We shall examine these different opinions in succession, with as much fairness and impartiality as we can; and first, of that opinion which attributes the origin of typhus fever to animal putrefaction. This has for a long time been considered not only as a cause of the fever now under consideration, but of other fevers also. Pringle remarks, that "The hospital and jail fever are to be considered as the same disease, and little, if at all, different from such as have arisen after battles, when the bodies of the slain have been left unburied to rot upon the field. This, Galen (continues Pringle) notes as one of the causes of pestilential fevers."* There is, however, such an abundance of evidence in refutation of this opinion, as "to leave no loop or hinge to hang a doubt on." Bancroft, in his able and philosophical work on fevers, has collected a mass of testimony to this effect, some of which we shall take the liberty to copy into this essay. The most remarkable fact which he relates, is the exhumation made in the churchyard of the Saints Innocens, at Paris, in the year 1786. "The churchyard of the Saints Innocens, at Paris, situated in one of the most populous quarters of the city, had been made the depository of so many bodies, that, although its area enclosed more than 1700 square toises, or near two acres, yet the soil had been raised by them eight or ten feet higher than the level of the adjoining streets; and upon the most moderate calculation, considerably more than six hundred thousand bodies had been buried in it, during the last six centuries; previous to which date, it was already a very ancient burial ground. Numerous complaints having been made concerning the offensive smells, which arose from this spot, and sometimes penetrated into the adjoining houses, and the public mind being greatly alarmed, it was at last determined to forbid all future burials there, and to remove so much of the superstratum as would reduce the surface to the level of the streets. This work was undertaken in 1786, under the superintendance of M. Thouret, a physician of eminence in Paris, and in two years he accomplished the removal of that superstratum, almost the whole of which was impregnated, or *infected*, as M. Thouret styles it, with the remains of carcases, and of quantities of filth and ordure, thrown upon it from the adjoining houses."

* Observations on Jail or Hospital Fever, p. 320.

"The exhumations" (says M. Thouret) "were principally executed during the winter; but a considerable part of them was also carried on during the *greatest heats* of summer. They were begun with every possible care, and with every known precaution; but they were afterwards continued, almost for the *whole period* of the operations, without employing, it may be said, *any precaution whatever;* yet no danger manifested itself in the whole course of our labors—no accident occurred to disturb the public tranquillity!"*

[*To be concluded in the next number.*]

ART. II. *Report of Meteorological Observations made in the City of New York, from May 1st, 1828, to May 1st, 1829, by order of the Medical Society of the City and County of New York.* By JOHN BAXTER, M. D., Secretary of the Meteorological Committee.

METEOROLOGICAL TABLE FOR THE CITY OF NEW YORK, FROM MAY, 1828, TO APRIL, 1829, INCLUSIVE.

1828–9	BAROMETER.				THERMOMETER.				RAIN.
	Highest range.	Lowest range.	Difference	Mean.	Hig range.	Low. range.	Diff	Mean.	
	INCHES	INCHES	INCHES	INCHES	DEG.	DEG.	DEG.	DEG.	INCH.
May	30.6	29.4	1.2	30.	80	40	40	60.	6.
June	30.15	29.6	.55	29.875	91	56	35	73.5	5.
July	30.	29.6	.4	29.8	92	61	31	76.5	3.75
Aug.	30.3	29.7	.6	30.	93	62	31	77.5	1.54
Sept.	30.2	29.7	.5	29.95	94	53	41	73.5	6.10
Oct.	30.4	29.55	.85	29.975	77	36	41	56.5	1.38
Nov.	30.3	29.05	1.25	29.675	66	30	36	48.	9.6
Dec.	30.35	29.5	.85	29.925	60	20	40	40.	.32
Jan.	30.45	29.25	1.2	29.85	47	10	37	28.5	5.54
Feb.	30.1	28.875	1.225	29.4875	42	12	30	37.	
March	30.25	29.1	1.15	29.675	64	22	42	43.	2.48
April	30.2	29.2	1.	29.7	79	36	43	57.5	4.82

OBSERVATIONS.

May. The barometer, this month, rose unusually high, 30.6, and also sunk quite low, 29.4, making a difference of 1 2-10 inches, and averaging 30 inches.

The thermometer rose as high as 80°, and sunk to 40°; difference 40°, and average 60°.

---

* "It does not appear, after the fullest enquiry, that any febrile disorder was ever produced by this immense mass of corruption, during the removals

The depth of rain that has fallen amounted to near six inches; being more than double the quantity which fell the last year.

But the weather generally was clear, the rain falling in showers.

The prevalent winds were easterly.

June. The barometer did not indicate over 30.15 pressure, but did not become less than 29.6; making only a difference of 55-100, the average being 29.875.

The thermometer rose, this month, to 91°, but was as low as 56°; making a difference of 35° between the greatest heat and the least heat, the average being 73° 5′.

The depth of rain has been great also this month, measuring a trifle over five inches, more than double last year; it was in frequent showers, and attended with much thunder and lightning, heavy and vivid; the nights have been moist and cool, the hygrometer marking very great dampness—seldom showing one revolution towards dry.

The cloudy and misty weather has been considerable.

The prevalent winds have been southeast and southwest.

July. The barometer, this month, has not shown a pressure above 30 inches, nor below 29.6; difference only 4-10; average pressure 29.8.

The greatest heat indicated by the thermometer was 92°, on the 25th and 26th; the least heat was 61°; the difference 31°, and average 76° 5′.

This month the quantity of rain has diminished, being scarcely three inches; the showers have, however, been frequent, and attended with electrical phenomena: last year it was 3 3-4 inches. The weather has been more cloudy, but the hygrometer indicating more dryness, has marked 2.5 very often.

Westerly winds have been the most prevalent; some N.W.

In the first part of the season the changes in the barometer, as well as in the thermometer, were rapid and more in extremes; but in June and July the barometrical pressure,

---

made in 1786, or while it was suffered to remain as a burying ground. The grave diggers were, indeed, sometimes thrown down suddenly, and, for a time, deprived of sense and motion, by the concentrated vapors which escaped, upon accidentally breaking open, by their spades, the abdominal viscera of bodies, in an early stage of putrefaction. These vapors, also, in a more diffused state, are said to have produced nausea, loss of appetite, and, in a course of years, paleness of countenance, debility, tremors, &c. But fever of any kind, and much less *contagious fever*, does not appear to have been noticed, as resulting from the offensive or putrid matters of this churchyard, either to the grave diggers or to the neighboring inhabitants." Bancroft, pages 93, 94, 95.

as well as the heat, were more uniform, though the thermometer did not rise to so extreme height as in 1827.

The quantity of rain which fell the first part of the season was very large, and attended with much thunder and lightning; this has been the case in all parts of the country, so that much damage has been the consequence. The rain diminished towards the last of July, but even in that month it was not unusually small. In the last three months the whole amount fallen, 14 inches, has been nearly double that of the same quarter of last year. The season, nevertheless, has been healthy, with the exception of rather an unusual quantity of dysenteric symptoms among adults, and cholera infantum rather more fatal than ordinary.

August. The atmospheric pressure, this month, was very equable, the maximum being 30.3 inches, and the minimum 29.7 inches; the range or difference amounting to only 0.6 inch, giving a mean of 30 inches.

The greatest thermometrical rise was to 93°, which was during the last week of the month; the first part of the month being moderate, the minimum was at the middle of the month, being 62°; difference 31°, and mean 77° 5′.

There were but two falls of rain this month, amounting to but 1.54 inch.

The weather generally clear and pleasant—but few electric phenomena. At the beginning of the month, N. E. winds prevailed—at the middle they were southerly, and towards the latter part W. and S. W.

September. The range of the barometer was still less this month than the last, being but 0.5 inch; the maximum was 30.2 inches—the minimum 29.7—mean 29.95.

The thermometer rose as high as 94°, this month, which was on the first, immediately after which there was a sudden fall, but was several times during the month at 80°, the minimum being 53°, the range was 41°, the mean 73° 5′.

At the beginning of the month, with the fall of the thermometer, there was a heavy fall of rain for three days, and four times afterwards, amounting, for the whole month, to 6.10 inches—electric phenomena but once.

The intervals between the falls of rain were mostly clear.

Winds from the ocean were mostly prevalent, viz. from N. E. to S. E., but some W. and N. W. occasionally blew.

October. The mercury in the barometer was raised, this month, to 30.4 inches, the minimum fall being to 29.55, the range being 0.85 inch; making the mean very nearly the same as the two last months, viz. 29.975.

The greatest rise of the thermometer was to 77°, though

the first of the month was cooler; the minimum was as low as 36°, which was about the middle of the month, so that 41° were traversed, giving a mean of 56° 5′.

There were but three slight falls of rain during the month, amounting to but 1.38 inch; but there were heavy dews, some hazy weather, and a black frost about the middle of the month. The atmosphere was generally clear through the month, scarcely an entire cloudy day the whole month. Electric phenomena once.

The prevalent winds were westerly; the sea breezes very few.

We thus see that for this quarter the barometrical changes have been very small, and the pressure equal, being little less than 30 inches. The mean of the thermometer for the two first months very nearly agreed—that for the last was somewhat less.

With the exception of a heavy rain the first week in September, when nearly 3 1-2 inches fell, the fall of rain was small, being, without that, but about 5 1-2 inches for the three months.

It should be here remarked, that, although the health of the city was unusually good, yet the mortality was large, which arose from the prevalence of dysentery, and remittent and intermittent fevers in the country around, where the mortality was very great, and many flying to the city for refuge, terminated here their diseases with their lives. The connexion of these epidemics, which were mostly in the neighborhood of marshes, with the great fall of rain in the beginning of the season, is conspicuous, which, evaporating this quarter, left bare much decomposing vegetable matter.

November. The barometer indicated no more than 30.3 inches this month, but the mercury fell to 29.05, giving a range of 1.25 inch; the mean was 29.675.

The thermometer indicated 66° as its maximum rise; its minimum was 30°, which was about the middle of the month, making a range of 36°, and placing the mean at 48°.

In the first week, a violent fall of rain took place, of over four inches in three days; afterwards repeated rains occurred, and one fall of snow, amounting altogether to 9.6 inches.

The weather was a continued alternation of cloudy and clear, and the winds no less changeable, being from N. E. to S. E. on one side, to W. and N. W. on the other. No Electrical discharges.

December. The range of the barometer was but 0.85 inch, from its maximum, 30.35, to its minimum, 29.5 inches; the mean 29.925.

The thermometer did not rise above 60° this month, and fell the last day to 20°, making a range of 40° and a mean of 40°, but the mean temperature was something above this.

There was but one appreciable fall of rain in December, which was 0.32 inch; the cloudy was small compared with the clear weather, and there were some mists—vegetation became deadened. No electric discharges.

The W. and N. W. winds were most prevalent, but some S. and S. E. occasionally.

January. The mercury in the barometer was raised, this month, to 30.45 inches as the maximum; the minimum was 29.25 inches, the range being 1.2 inch, the mean being 29.85 inches.

The maximum of the thermometer was 47°, which was at the middle of the month; the minimum was, near the beginning of the month, 10°, and only once; the range 37°, and the mean 28° 5′.

There were seven falls of snow and rain, amounting to 5.54 inches of water; the snow remained but a short time, being slight, or followed by rain.

There was much cloudy weather and some mist; with the exception of a few days the weather has been mild, the winds mostly from the W. and N. W., although N. E. and S. E. winds were frequent.

The season for this quarter has been mild and pleasant—the W. and N. W. winds not unusually strong, and but slight flurries of snow, all promising a moderate winter. It will be recollected that the coldest weather the last winter was in November.

The fall of rain, amounting to 15.46 inches, has been rather larger than during the same months last season, and a large portion fell the first week in November, viz. four inches.

The city has continued healthy, and the mortality considerably lessened since last quarter. The epidemic that prevailed in the country has mostly ceased its ravages.

February. The maximum of the barometer this month was 30.1, but the minimum was extraordinarily low, viz. 28.875, and this was remarked in a number of places. The mean was 29.4875 inches.

The thermometer did not rise above 42°, nor sink below 12° above 0, yet the uniformity of the cold made it a severe month. The mean of the temperature was 37°, the range being 30°.

There were four falls of snow, three of which were very heavy; there was, in addition, one fall of rain; owing to the drifting of the snow and the breaking of the guage by the

frost, the depth of water was not appreciable. The weather, generally, was clear, and the winds almost continuous from the W. and N. W. On the 20th, very heavy from the N. E.

March. The maximum rise of the barometer in March was 30.25, and the minimum was again low, as 29.1; the mean 29.675.

The thermometer was as high as 64°, and the minimum not below 22°, which makes a range of 42°, and places the mean at 43°; yet the mean was considerably below this, as the temperature was low, not often or long at a time above the freezing point.

The S. E. winds became rather more frequent this month, but the N. W. and W. kept their place and strength with much uniformity.

There were two falls of snow and four of rain, the whole quantity of which was 2.48 inches. The S. E. winds were generally attended with fogs and mists.

April. The barometer did not rise above 30.2, but fell as low as 29.2; giving the mean at 29.7.

The thermometer, towards the last of the month, rose as high as 79°, and very frequently was as low 36°, placing the mean at 57° 5′; the range being 43°.

There were seven falls of rain this month, making the depth of water 4.82 inches.

The land winds were not so cold and unpleasant as they have been, and they were not so frequent; the winds from the ocean were more prevalent and uncomfortable. The weather, as usual at this season, very variable—vegetation more backward than usual, and there was a great dryness of the atmosphere.

This quarter has been almost a continued winter, the spring hardly commencing the middle of April. In all parts of the country there were great quantities of snow, even as far south as the Wabash, where the thermometer was frequently 20° lower than here—*the lowest standing at* 10° *below* 0. But it has been for this city a severe quarter, owing more to the continuousness of the cold than to its intensity.

The whole quantity of water fallen in rain or snow cannot be exactly ascertained, but it could not be less than twelve inches.

The health of the city has been very good; the most prevalent disease has been the measles.

To unravel the complicated operations of atmospheric changes, is an undertaking of no small labor and importance. To designate exactly how much is due in these changes to pressure, to heat, to atmospheric currents, to

evaporation in the formation of clouds, to electricity, to the formation of dew, rain, and snow, to ascertain the bearing that each has upon the other, and to trace the line of causation, is a part of the duty of the meteorologist, which, for a long time neglected, has as yet made but small progress, and is still in its infancy; and even the practical observations upon which this, like all sciences, must be founded, have been, until lately, mostly subject to those alone, whose occupations make them dependent upon the weather in their pursuits. Thus have the sailor, the husbandman, and the shepherd, always been considered the best meteorologists, and their predictions looked upon as comprehending all the wisdom with regard to the weather, and their signs as established precursors of those changes, which man's curiosity and interests urge him to wish to foretel. The distinguished trait of man's improvement, has, however, through the other sciences, made some movement in this. There are a few to whom meteorology owes much—the valuable labors of a Hutton, a Howard, a Dalton, and a Daniels, and some others, have placed upon the basis of a science, what was before but a mass of vague hypothesis, and of signs mixed with superstitious dreads picked up in various climes, from different people, and seldom to be depended upon.

As observed by the latter gentleman, Mr. Daniels, "There are two distinct atmospheres, mechanically mixed, surrounding the earth; whose relations to heat are different, and whose states of equilibrium, considering them as enveloping a sphere of unequal temperature, are unequal to each other. The first is a permanently elastic fluid, expansible in arithmetical progression by equal increments of heat, decreasing in density and temperature according to fixed ratios, as it recedes from the surface; and whose equipoise, under such circumstances, would be maintained by a regular system of antagonist currents.

The second is an elastic fluid condensible by cold, with the evolution of caloric, increasing in force in geometrical progression with equal augmentation of temperature, permeating the former, and moving in its insterstices, as a spring of water flows through a sand rock.

Now the changes produced in these two atmospheres by an increase or diminution of their densities, and their influfluence on each other through the means of caloric, and their own elasticity, may be considered as the basis of all the phenomena which meteorologists observe as occurring on our globe. Thus, in a state of things exactly balanced, a change of temperature, productive of a change of density,

alters the velocity of currents, and a struggle ensues to regain the balance, which is productive of deflections in the course of winds, accumulations occur in some parts, and deficiencies in others, for measuring which the barometer serves. But when an aqueous atmosphere is afforded by evaporation with an equal temperature, an equilibrium would be maintained, and that atmosphere would be transparent. If condensation takes place at one point, evaporation is increased at another; and, vice versa, a struggle is kept up to attain the state of rest. But these atmospheres surround a sphere unequally heated on its surface, which, in either of them separately, would produce currents, form changes in their densities, and the condensation of portions of the aqueous atmosphere would be productive of clouds, and their precipitation rain, snow, and hail. But supposing a mixture of permanently elastic fluid with aqueous vapor, their action upon each other will be mechanical. The vapor, flitting through the air, is retarded as through cotton, or through sand; and either becomes equipoised, or is in intestine motion. Increase of bulk, and decrease of specific gravity, are the result of the mixture. A state of rest and equal mixture cannot exist. A state of motion must be kept up continually, occasioning a constant struggle. When the vapor is first formed, the air is the only obstacle to be overcome; for which a small portion of tension is required. The force of this is uncertain; but as the vapor accumulates, the resistance increases, so that the vapor becomes of higher temperature; but, as those vapors become clouds and ascend, the resistance diminishes both from the air and pressure of vapor. Under this process, about six grains of water are raised from a square foot per minute; and as condensation occurs, by descending and meeting the heated air, it is evaporized again and rises, thus acting as a carrier of heat.

The supply of vapor which occasions rain, may be traced to two sources; one is the evaporation from the immediate latitude itself where it is precipitated; and the other from a stream of vapor which is perpetually struggling to advance from the equator. Sometimes the rain may be derived from the two sources conjoined, and sometimes from either separately. When derived from the first, the operating cause is the sudden fall of temperature, produced by cold currents, or the changes of the seasons, and assumes the form chiefly of showers of greater or less continuance. The expenditure of vapor is but slowly supplied, and the precipitation occurs at intervals. Rain from this source is always accompanied by a declining temperature.

When, on the contrary, in consequence of diminished pressure, the tropical current reaches in succession the colder parallels, the supply continues in a perpetual flow; the temperature is raised, depression of the barometer increases, and rain descends with little intermission.

The mean temperature in its progress guides both the rate of evaporation, and the quantity of vapor the air can support. The progress of the vapor in fine weather, may often very satisfactorily be traced by means of the clouds. During the heat of the day, it rises from the surface of the land and waters, and reaches its point of evaporation in greater or less quantities. Partial clouds are formed in different parallel planes, which always maintain their relative distances. The denser forms of the lower strata, as they float along with the wind, show the greater abundance of precipitation at the first point of deposition; while the feathery shape and light texture of the upper attest a rarer atmosphere. These clouds do not increase beyond a certain point, but, after remaining stationary in quantity and figure for many hours, as the heat declines, they gradually melt away.

This formation of clouds, in the upper region, assumes the cirriform shape, and are frequently precipitated and become more dense, when they descend in a nimbus form, and the higher temperature dissolves them; the vapor diffuses and spreads out until, the equilibrium being formed, precipitation ensues, and the air can support it no longer.

The admission of vapor into a dry atmosphere increases the pressure, and the barometer rises; its condensation allows expansion, and consequent fall of the barometer follows. The increase of evaporation not being supported by the higher regions of the air, the vapor is precipitated, and thus rain follows the fall of the barometer.

Thus, while the general character of vapor and air is owing to the latter, which in its irresistible motions must hurry the former along with it, the influence of the vapor upon the air, though slower, is more sure; and the gradual and silent processes of evaporation and precipitation govern the boisterous winds. By the irresistible force of expansion unequally applied, they give rise to undulations in the elastic fluid; the returning waves dissipate the local influence, and the accumulated effect is annihilated again to be reproduced.

The northerly current above spoken of, which is the lower polar current, is supposed to occur on a sphere at rest only, and unequally heated. But then the motion of our sphere is from west to east, and the sphere moving faster than the

polar current, its inertia gives an easterly current, the junction of which with the northerly produces the northeast current, and under the tropics, the trade winds which are occasioned by the greater velocity of the equator. Near the equator they blow directly from the east; the polar currents also meeting these, they counterbalance each other, producing calms; at a greater elevation a current blows in a reverse direction.

The power of the sun at the meridian has another effect in producing currents from east and west, and the heating of the land during the day, a sea breeze until after the sun declines.

It is established as a principle by Daniels, "that the equal height of the barometer, in every situation upon the surface of the sphere, was dependent upon the maintenance of the equatorial and polar currents, with a certain determinate velocity in different parts of their courses; and that disproportionate alteration or interruption in these could take place without a correspondent effect upon the mercurial column." That is, that an under current of air sets from the poles to the equator, where it is raised by the constant heat, and returns by an upper current to the poles, where it falls by the cold; and the various winds are but an interruption of these currents from various causes.

Such irregularities, the result of a diminution of mechanical pressure, will produce changes of temperature, and especially in the upper parts of the atmosphere; by a sudden depression of heat, the result of mixing with a large body of cold air, the pressure of the surrounding air will be productive of a mechanical effect, and an adjustment of density takes place before that of temperature; hence a decrease of temperature takes place in a greater degree than that of density, and the barometric pressure is increased to equalize the specific gravity. But it is in aqueous condensation, and not in changes of temperature alone, that we must look for the cause of barometric changes; hence, under the tropics, an alteration of not more than $\frac{1}{4}$ of an inch is shown; while, at other points, three inches are sometimes produced.

The cooling of the land produces the reverse. This cause influences and changes the direction of the trade winds on the western coasts of large continents. Our east winds in summer are produced by it, also the monsoons of the Indian Ocean.

To Mr. Daniels belongs the credit of having given clearer views on this subject, than any one who has hitherto written on it. To him we are indebted for some of the above ob-

servations, which we have endeavored to give as concisely as possible. His synthetic mode of procedure, so philosophical, is greatly calculated to elucidate a hitherto obscure and mysterious subject.

As it is well ascertained that the usual diurnal changes in the barometer are at four determined periods in the twenty-four hours, we have changed the times for those observations, and taken them at 9 A. M., when the greatest elevation occurs; at 3 P. M. when the greatest depression is met with, and at 11 P. M. when the other elevation is produced—at 3 A. M. the other lowest fall occurs.

The hygrometer used is still imperfect, and should be replaced by one of Daniels's construction, for want of which, the hygrometric observations have not been detailed.

ART. III. *Contributions to Pathological Anatomy.* By CHARLES A. LEE, M. D., Physician to the Northern Dispensary of New York.

IN presenting the following cases to the public, if any apology be due, it is found in the conviction that to pathological anatomy we are indebted for the present highly improved state of medical science; and that to the same source, and a still greater accumulation of facts, we must look for its further advancement.

CASE. I. *Inflammation and consequent Mollescence of the Heart.*—Sarah Stevenson, a colored woman, applied to me, in the spring of 1827, for medical aid. Her constitution was naturally good, but latterly she had become intemperate. From her mother I learned the following history of her case: For the last two or three years she had suffered from the brutal treatment of her husband, and about three weeks previous to my visit, had aborted in consequence of a blow she had received over the region of the uterus. She was then in the third month of pregnancy, and from the injury then inflicted, she had never recovered. After the expulsion of the fœtus, there came on a purulento—sanguinolent discharge from the uterus, with severe pain throughout the whole abdomen. Extreme gastric irritation was an early prominent symptom, and it increased with the corresponding uterine affection, passibus æquis. To constant nausea, a distressing vomiting succeeded, which nothing could allay. At this stage of her complaint she called in a young physician, who left her a dose of tart. ant., supposing, probably, that the

symptoms originated from a foul stomach. As might have been expected, her sufferings were aggravated. Two days afterwards, I found her in great distress throughout the whole body, severe pain in the head, vomiting, or attempting to vomit, frequently, great tenderness at the epigastrium and over the uterus, with a small frequent and irritable pulse. The treatment need not be detailed, as nothing arrested the progress of the case to a fatal termination. Her bowels were uniformly constipated, the temperature of the body was variable, the affections of the head increased, and spasms occasionally took place. The pulse was at times irregular, intermittent, and fluttering, with a painful sense of sinking at the epigastrium. No article of medicine or food was retained on the stomach, till at length her breathing became laborious, she lost all consciousness, and died just four days from the time I was consulted.

Dissection. Drs. Cleaveland and Andrews were present at the examination of the body. In the external appearance there was nothing remarkable. The abdominal parietes were flaccid, and there was considerable emaciation. The uterus was a little larger than natural, and rested lower in the pelvis. The inner surface of the fundus uteri was thickly covered with a dark bloody mucus, which was easily rubbed off with the finger, after which drops of blood oozed out in considerable quantity. The os uteri was ulcerated, with considerable loss of substance, which sufficiently accounts for the previous purulent discharge. The ovariæ were large, and contained several whitish corpuscles of various sizes, apparently indurated. The peritoneum bore no particular marks of inflammation; but the mucous coat of the stomach was reduced to a soft reddish pulp, easily macerated between the fingers, and fully injected with blood. Traces of inflammation or *irritation* were visible through the whole tract of the intestines, particularly in the duodenum. The lungs were healthy, and in their posterior part their veins turgid with blood. The heart was preternaturally large, flabby, and soft; to such a degree that the finger could easily be thrust through its walls. Both mitral valves were completely obliterated; so that the auricles and ventricles were thrown into one cavity. Polypi, or rather patches and shreds of fibrine and coagulated blood, were found in the ventricles, but no traces of the *columneæ carneæ* were perceptible. The usual quantity of serous fluid was contained in the pericardium. A large quantity of serum was effused between the pia mater and arachnoid membrane of the brain, presenting the appearance of a transparent cerebral

envelop of nearly one third of an inch in thickness. The internal vessels of the cerebrum were pretty fully distended with blood, and an ounce of fluid, perhaps, in the ventricles.

Remarks. Though the history of the above case is not as complete as I could wish, yet it exemplifies very fully the intimate sympathy existing between the uterus and the heart. Though the stomach exhibited marks of extreme irritation, yet, compared with the heart, its texture was comparatively sound. It is also worthy of notice, that the irritation and subsequent inflammation of the heart, produced passive aneurism of that organ. This fact is particularly noticed by Dr. Abercrombie, in his work on diseases of the heart, and he explains it, in the only way, indeed, in which it can be explained, from the loss of muscular power which the inflammation induces: the blood being thus returned to the cavities of the heart faster than it can be expelled, passive dilatation is the inevitable result. This keeping pace with the increasing debility, it is not to be wondered that the period should speedily arrive, when the motive circulatory powers must sink under the accumulated weight of blood. In the above case, no satisfactory diagnosis could be formed from stethoscopic examination.

CASE II. *Angina Pectoris.*—In July, 1827, William Ross, shoemaker, æt. 40, applied at the Northern Dispensary for medical advice. He was a man of intemperate habits, lax fibre, and bilious temperament; had a peculiar expression of anxiety and suffering in his countenance, which was uncommonly pale and haggard. He complained of an inexpressibly painful sensation at the top of the sternum and in the region of the heart, accompanied with great dyspnœa and depression of spirits. His pulse was about 112, full, incompressible, and chordlike. I never felt a pulse which seemed to jerk so violently under the fingers. V. S. ad. ℥xx. Pulse rose after bleeding to 125—no relief. The blood had no peculiar appearance, but contained rather too much serum. He was put on the use of a weak infusion of dig. purp. The next day, Tuesday, he again came to the Dispensary, with an aggravation of all his symptoms. He was instantly out of breath when he undertook to ascend a staircase or any eminence, and he could scarcely breathe except in an erect position. *Wednesday*, I was sent for in haste, and found my patient walking the room and gasping for breath, complaining at the same time of great pain and oppression at the heart. With the advice of another physician present, I bled him immediately, with my finger on the wrist; as soon as I perceived an alteration in the pulse, the blood was stopped.

and while binding up the arm, he fainted, and fell on the floor. He, however, soon revived, sprang up, and said he felt as well as ever he did in his life. We ordered him to bed, and to have some warm wine prepared for him, and regularly administered, *which was not done.* He was thrown on a bed in a hot garret, and in the course of the day was found dead.

Dissection. In this dissection I was kindly assisted by Dr. I. Brinkerhoff. On raising the sternum and turning aside the mediastinum, the pericardium appeared, nearly filled with limpid serum. The heart was preternaturally enlarged, its parietes being proportionably thickened and covered with a dense layer of fatty matter. The venæ cavæ and right side of the heart were turgid with dark, uncoagulated blood. The aorta was aneurismal, being nearly twice the usual diameter, and at its root, near the ventriculo-aortic valve, there were extensive ossifications. The stomach was very large, and its pyloric orifice in a scirrhous condition, and considerably contracted in its diameter. The mucous coat was in a soft, glutinous state, and could be easily scraped off with the finger nail. The whole texture of the organ was softened, and nearly colorless, and the inner coats were corrugated into various rugæ, some of them three quarters of an inch in thickness. No blood vessels could be seen in any part of the stomach, and a scirrhous tumor was found between the muscular and peritoneal coats of the duodenum. The liver was enlarged and studded with tubercles. Lungs natural. Other viscera not examined.

Remarks. Pathological investigation goes far to show, that sternalgia, or angina pectoris, is not a mere spasmodic affection, as was once generally supposed, but that it originates from organic changes and such other causes as impede the circulatory functions and produce preternatural accumulations of blood on the right side of the heart and neighboring large vessels. Hence, in different cases, there have been found ossifications of the coronary arteries and semilunar valves—masses of fat encumbering and clogging the heart; hypertrophy of the auricles or ventricles, or both; aneurismal aorta, excessive general venous plethora and dropsy of the pericardium; and each of these appearances has been assumed by different pathologists, as the sole cause of the disease; they not reflecting, perhaps, that the same effect would flow from all, viz. an inordinate quantity of blood in the cavities of the heart. Such a condition is indicated by all the symptoms. That it may occasionally be caused by excessive plethora, as taught by Dr. Hosack, is highly proba-

ble; but it is also known to occur, as in the above case, in men of spare, thin habit, who show no marks of general venous plethora.

CASE III. *Traumatic Tetanus.*—March 22, 1828, called to visit John McBride, an Irish laborer, æt. 35, and very intemperate in his habits. A week previous he had trodden on a rusty nail, which passed between the adductor muscles and the metatarsal bone of the little toe of the right foot. He felt but little pain at the time, and had continued at his work, with but little inconvenience, until this morning. I found him laboring under extreme anxiety and nervous agitation, with cold sensations creeping over his body, and great distress at the bottom of the sternum. The muscles of the face and neck were very rigid, and his jaw firmly fixed, so that it could scarcely be opened sufficient to admit a small spoon. A cold clammy sweat covered the face and body. There was at the same time a painfully distressing sensation in the throat and fauces, resembling suffocation; and whenever he attempted to swallow, he was seized with violent convulsions. The sense of constriction over the whole chest and body was extreme, and the belly excessively hard from the retraction of the abdominal muscles. In a short time the body and limbs became permanently extended and inflexible; the flexors and extensors exactly balancing each other in a state of tonic spasm, and he lay as incapable of motion as a statue. His power of articulation, however, was so far retained, that with some difficulty he could make himself understood. His mind was throughout uniformly rational.

Having, a short time previously, treated a case of trismus successfully by nauseating doses of tart. antimony, I determined to make an effectual trial of it in the present instance.* Accordingly, after freely laying open the wound, and V. S. ad. ℥xv, two grains were administered, and the same quantity directed to be given every half hour. His pulse at this time was 72, free and throbbing. With considerable difficulty the antimony was given as ordered, until about ten grains had been swallowed, when sickness and efforts at vomiting succeeded. The pulse now fell to 60, and the muscles showed signs of relaxation. During the afternoon there was but little alteration; at times there appeared a

* A strong solution of tart. ant. was made, and insinuated between the lips, and thus sucked through the interdental spaces. When small quantities of medicine are to be administered in a fluid form, this will, no doubt, prove the most convenient mode.

slight mitigation of the symptoms, and he complained of a perpetual chill, which nothing could alleviate; attempts at swallowing were distressingly painful; the risus sardonicus settled upon his features; one grain of tart. ant. was directed to be given every hour through the night. Next morning, 23d, no better—slept more—skin hot and dry—pulse 80—muscles all rigid; had several evacuations from the bowels, and the sense of suffocation was extreme. The muscles about the neck, particularly those concerned in swallowing, appeared more swollen and dense, and the ribs were so constricted by the contraction of the intercostal and abdominal muscles, that respiration seemed wholly performed by the diaphragm. The antimony was continued through the day, until he had taken upwards of ℈ij; still there was but slight, if any, perceptible remission of symptoms. Pulse ranged from 85 to 100.

At evening, the jaws still remained fixed, and every few minutes violent spasms affected the whole body, followed by profuse perspirations. As a tolerably fair trial had been made of the antimony, it was now exchanged for tinct. opii and wine; one drachm of laudanum was given every two hours through the night, which the attendants informed me procured a little unquiet sleep, but no muscular relaxation.

24th. Considered somewhat better: less force was required to separate his teeth; he could turn himself in bed, and move his limbs a little. Pain at epigastrium continued severe, and likewise through the tract of the spine; pulse 120; skin hot and dry. The laudanum was continued by the mouth and injections, until between two and three ounces had been given. At noon his pulse was 100; otherwise the same. At 4 o'clock P. M. he raised himself in bed, for the first time since his attack, and called for a cup of chicken broth, which he drank without difficulty, and immediately fell back, and died without a struggle.

Dissection. An examination of the body was made the following morning, at which Dr. J. O. Pond was present. On the top of the foot was a livid discoloration, and on tracing the course of the nail, the parts were found extensively inflamed, and a small quantity of iron rust was lodged between the bone and adductor minimi digiti muscle. In this place was about a tea spoonful of pus and flakes of coagulating lymph. A branch of the peroneal nerve had been lacerated, and, as far as it was traced, appeared pulpy and highly vascular. No doubt could exist of its extending to the spinal marrow. The *stomach* showed some marks of inflammation, and its mucous coat was softened and injected with blood.

The duodenum was also very red. The liver was greatly enlarged and indurated; the vessels of the scalp bled freely on incision, and the blood throughout the body was uncoagulated.*

Remarks. The true pathology of traumatic tetanus is undoubtedly an inflamed state of the nerves of the injured part, and thence extending to the spinal column. In some cases, it is possible that post mortem traces of inflammation may not exist through the whole tract of the affected nerve, and still more possible that the spinal marrow may not have undergone sufficient structural derangement from irritation to leave evident appearances after death; still, when we reflect that in some cases such marks have been observed, that all the symptoms of this horrid malady indicate excessive nervous irritation, that this irritation must be transmitted to the spinal marrow, and that the result—muscular contraction—is similar to that caused by the application of an extraneous irritating substance to the same, we need not hesitate greatly as to the true pathology of this disease.

CASE IV. *Poisoning by Laudanum.*—Mrs. A., æt. 40, in a fit of tedium vitæ, took a large dose of laudanum, the exact quantity not known. The result proved fatal in about sixteen hours. The symptoms and treatment need not be detailed.

Dissection. On making an incision into the scalp, the superficial veins were very full of dark uncoagulated blood. Though unconnected with the cause of death, it is worthy of notice, that a portion of the dura mater near the frontal sinus was ossified to a considerable extent; and in the vertex of the cranium there was a deep depression in the parietal bones, large enough to receive a walnut, with a corresponding protuberance of the brain and dura mater. The longitudinal and lateral sinuses were distended with blood. Between the pia mater and arachnoid membrane, there was a large collection of coagulating lymph and serum, forming a gelatinous appearance of a yellowish tinge. The choroid plexus was very vascular, and in the bottom of the ventricles there were small flakes of purulent matter.

The lungs were congested; the right side of the heart was

* To show the *peculiar facilities* for pursuing post mortem investigations in New York, I may here mention, that at this stage of the examination we were violently attacked by a mob, who had been informed by some person of what was going on in the house, and it was with great difficulty we effected our escape. A guard of fifty men was required for several nights to defend my house from attack, and an absence of a few weeks from the city, served, in some measure, to allay the excitement.

full of coagulated blood. The mucous villi of the cardiac orifice of the stomach were redder than natural, and softened to a glutinous consistence. The termination of the æsophagus seemed inflamed, and the mucous lining of the intestines erythematous.

Remarks. As the purely narcotic vegetables act on the nervous tissue of the stomach, and secondarily on the brain, it cannot be expected that any very manifest changes from healthy structure should be found. In the only cases examined by Morgagni, acrid vegetable poisons had been taken; (heleborus niger, rhododaphne, and solanum;) of course marks of inflammation were present. The jejunum and colon were found inflamed after swallowing the berries of solanum, and in a case of poisoning by mushroom, the stomach and duodenum were highly vascular and excoriated; still it remains to be settled by pathologists, what changes, if any, will be induced, by a paralysis of the nervous tissue of the stomach by the application of a purely narcotic substance, and where irritation ends and inflammation begins.

CASE V. *Enteritis and Disorganization of the Colon.*—The subject of the following case was John Haisley, an Irishman, æt. 35, by occupation a weaver. His habits were *rather* temperate, and his constitution unimpaired. He had been at work through the month of February in a damp place exposed to a current of cold air, and had been complaining about a week when I first saw him, Jan. 1st, 1829. Abdomen tender to pressure; pain not very severe; constant nausea and vomiting; pulse 90, wiry and small; countenance anxious and pale; tongue shining, deeply furrowed longitudinally, clear, soft, and moist. V. S. to ʒxvi; after bleeding, pulse became fuller and stronger—*pain in the bowels greatly increased.* For several days has had several evacuations daily—stomach retained no food, nor medicine, but calomel, of which ℈j was given.

Jan. 2. Worse. Pain more severe—tenderness greater. V. S. ad. ʒxx—epispastic to the abdomen. Hyd: sub. mur. ʒij, pulv. g. acaciæ. ℈i. M. vi. pulv., una sum. quaque 3ta hora.

3d. Symptoms unabated—bowels costive—pain intense. V. S. to ʒxvj. Continued calomel powders, with a small quantity of opium. No impression from the blister—tongue flabby and clean—look anxious.

4th. Continues the same. Pulse 120—extreme tenderness about the umbilicus—gastric irritation severe—bowels costive. Enemata, calomel and opium, fomentations, &c.

5th. Abdomen swollen and tense—other symptoms the same. Continue treatment as above.

6th. No better. Had profuse evacuations from the bowels of bloody serum, mixed with shreds of coagulable lymph and mucous membrane, with large quantities of air. Distress at precordia extreme—stomach retains nothing.

7th. Immense discharges from the bowels, like those of yesterday, of an extremely offensive smell, resembling that of sulphuretted hydrogen gas.

From the 7th to the 14th, when the disease terminated fatally, there was no perceptible abatement of symptoms. Vomiting continued, with a tympanitic state of the bowels and very profuse serous discharges, containing shreds of ulcerated membrane. The strength held out remarkably to the last, as he could raise himself in bed, and even walk across the room, two days before he died. The pulse ranged from 90 to 120—the skin was uniformly dry, while the tongue was clean and smooth.

Dissection. Dr. J. Stewart was present at the examination. On laying open the abdomen, the peritoneum was found thickened, opaque, dense, and of a cartilaginous whiteness and texture, and adhering so firmly to the abdominal muscles, that great force was required to separate it. But few blood vessels of any size were noticed in it. Large quantities of air of a highly fetid smell escaped. The intestines were so changed and glued together by adhesions and false membranes that the different portions were with difficulty recognized. Several ulcerated perforations were found in the colon, and on laying open the intestine the ileo-cæcal valve was found to be obliterated, and no trace of the *valvulæ conniventes* existed. The mucous coat seemed wholly gone, while the remaining coats were thickened, ragged, and spongy in their texture. Indeed, so softened and disorganized were the cæcum and colon, that they scarcely retained tenacity sufficient to hold together while removing them from the body. Ulcerative inflammation had attacked the inner surface of all the large intestines—in some places entirely destroying the texture, in others leaving patches of ulceration of various sizes. The edges of the ulcers were generally thick, irregular, and rugose, of a deep, dirty, brown color, and often terminating in the muscular coat. Gangrene had occurred in two or three spots only, which were of a deep livid hue, and easily pierced through with the finger. The whole alimentary canal was involved in the inflammation, though the chief violence was spent on the large intestines.

Remarks. Though the symptoms of inflammation and ulceration in the coats of the intestines are sometimes so ob-

scure as not even to be suspected till discovered after death, as I have more than once observed, still it is fortunate that this is a comparatively rare occurrence, and only happens when the inflammatory action is so strong as to overpower the nervous sensibility of the part. In the present case there was but little pain before bleeding, and it was greatly increased by every subsequent abstraction of blood. For the few first days of the attack, the discharge from the bowels was of a dysenteric character, and was undoubtedly caused by a moderate degree of inflammation, causing the extremities of the secerning arteries to pour out blood, instead of serum. Since it has been fashionable to attribute dysentery, piles, &c., to an obstruction of the liver and portal circulation, and consequent regurgitation of blood through the mesenteric veins, the state of the arterial vessels has been too much neglected. If there be an obstruction through the vena portæ, it is quite evident that there will be a corresponding dilatation of the secerning extremities of the arterial capillaries. This, I apprehend, is the true pathology in most mild cases of dysentery, and in the first stage of enteritis; it is rendered highly probable, both from the florid appearance of the blood, and from the early period at which it occurs.* The immense discharge of bloody serum which took place towards the close of this case, could only have been caused by the excessive ulceration of the mucous coat and the abrasion of the arterial extremities.

CASE VI. *Suffocation.*—May 21st, 1828, I was called to see a child, two years of age, that had been taken suddenly with a fit of coughing, followed by symptoms of strangulation. When I arrived, the child did not breathe, though but a few minutes had elapsed since it was first seized, and the parents were so alarmed that they could give no satisfactory account about it. Suspecting some substance to be lodged in the trachea, another physician being present, we immediately proposed tracheotomy, but the father said he preferred a *dead child* to a living one with its *throat cut.* Warm bath and other means were used to resuscitate it in vain.

Dissection. The liver, spleen, and intestines all healthy. The stomach contained a pint or more of undigested aliment. which had undergone acetous fermentation. The posterior portion of the stomach was of a deep vermilion color—the

* At least eight pounds of fluid were passed every twenty-four hours for several days in succession, together with an abundance of patches of ulcerated membrane of a deep yellow color.

rest natural; right side of the heart full of blood—lungs inflated with air. In the trachea, about an inch from the glottis, was found a piece of fat beef, sufficiently large to fill the whole passage. The child had hooping cough, and the beef was probably drawn in, in the inspiration of coughing, thus leaving the lungs permanently inflated.

CASE VII. *Epilepsy and Paralysis.*—Mrs. S., æt. 30, received a blow on the left temporal bone, in the circus, in the year 1820, from one of the riders pitching on her head from the ring, when in full gallop. She was stunned by the blow and carried out. From that time she was afflicted with severe pain in that part of her head, which was subject to excruciating exacerbations from very slight causes. For the first two or three years, her mental powers were unimpaired, though at times her distress seemed so great as to threaten a speedy loss of reason. Epileptic fits then occurred frequently, and these were succeeded by a loss of consciousness and memory. At times she would lie insensible for hours together, incapable of motion or of being roused. These attacks became more frequent and severe. She always put her hand to the left side of her head when speaking of her complaint, and requested when dead that her brain might be examined. In the commencement of the year 1828, she became paralytic on the right side, and died in the ensuing February.*

Dissection. Drs. Stewart, Brinkerhoff, and Moore were present at the examination. On cutting through the temporal muscle of the left side, where the blow was received, the muscle was found three times its natural thickness and of a semicartilaginous texture. The temporal bone subjacent was likewise much thickened. The dura mater underneath adhered firmly to the bone, and could not be separated. The pia mater could not be distinguished, and the brain adjacent was firmly attached to the membranes, and was completely disorganized and softened in its texture. In the middle lobe of the left hemisphere of the cerebrum there was an abscess as large as a hen's egg, lined with an adventitious membrane of coagulable lymph, and containing a spoonful or more of pus. This was of a dull white color, and the brain surrounding the cavity was softened without any traces of vascular injection.

Remarks. While I would allow full justice to the merits of Recamier, who contends that "ramollisement," or softening of

* I regret that I am unable to give a more full detail of the symptoms of this interesting case. But I saw her only at a late period of her illness, and the above history was given me by her friends.

the brain, is a disease *sui generis*, a peculiar degeneration in which local inflammation never enters as a cause; in short, that it is the effect of a general derangement of the system, as an ataxic, nervous, or malignant fever—I must, at the same time, express my doubts respecting the correctness of this pathology. The case above detailed, as well as others which might be given, is directly in proof that inflammation of the brain from local injury may terminate in a softening, "ramollisement," of its substance. Indeed, we see no good reason why inflammation of the brain may not produce a diminution of its consistence, and also a change of color proportioned to the degree in which blood in the first stage, or pus in the second, may be infiltrated.

The symptoms, likewise, of cerebral inflammation, as Lallemand and Abercrombie contend, and as exhibited in the above case, are precisely those described by Recamier as belonging to "ramollisement." There was the same gradual diminution of sensibility and muscular power, comatose state, and dilated pupils, together with long continued headache, which this pathologist contends are diagnostic of this *peculiar degenerescence*.

CASE VIII. *Poisoning by Tart. Antimony.*—This occurred in a child of a few weeks old, who swallowed about fifteen grains in solution; violent puking and purging followed, attended with convulsions which soon carried it off.

Dissection. Mucous coat of the stomach was red and softened; on holding it up to the light, it seemed of a bright crimson color. It contained a small quantity of slimy mucus, which appeared like the mucous membrane softened. The texture of the cardiac orifice seemed more changed than that of the pyloric. The duodenum was of a deep brown color, almost livid, and contained the same kind of substance as the stomach. The inflammation extended no farther than the colon. The vessels of the scalp, as well as those of the brain, were full of blood, showing a preternatural determination to the head. The ventricles were half filled with water, and there was effusion between the pia mater and arachnoid membranes. The right side of the heart was distended with blood. The mesenteric glands were much enlarged; some of them reddened and soft, others brown, or of a liver color, and indurated. These extended through the whole mesenteric circle and though unconnected with the immediate cause of death, are interesting when viewed in connexion with the fact, that the child had been evidently laboring under marasmus since birth.

CASE IX. *Icterus, from Obstruction of the Ductus Communis.*—Mrs. L., aged 60, had been afflicted for several of the last years of her life with severe attacks of jaundice, which generally resisted with much obstinacy all remedies usually resorted to in such cases. The symptoms were, a sharp, seated pain in the region of the duodenum, extending at times to other parts, particularly the top of the right shoulder, attended with great irritability of the stomach and loss of appetite, frequent pulse, dry tongue, constipated bowels, high colored urine, fever, and a bright yellowness of the skin and eyes. Her death occurred, after much suffering, in March, 1826.

Dissection. The stomach was somewhat enlarged, and the mucous coat so soft as to be easily scraped off with the fingers. About a pint of dark colored, semifluid offensive matter was contained in it. In various places the coats were studded with red dots, the vessels radiating as if from a centre. The spleen was much shrivelled in size, of a harder consistence than natural, its structure and function both being evidently deranged.

The duodenum was found adhering firmly to the transverse fissure of the liver, by a fibro-cartilaginous mass, involving the hepatic and cystic ducts, and the hepatic artery and vein. The duodenal coats were thickened and indurated, obliterating its cavity to such a degree, that it would not admit any thing larger than a common goose quill.

The liver was less in size than in a healthy state, and more dense in structure. The gall bladder was totally obliterated from an adhesion of its inner coats, caused by inflammation, and this seemed to have been of long standing. The hepatic duct was involved in the centre of the cartilaginous structure already mentioned, and its duct completely closed. Its tubuli or ramifications in the liver were enormously distended, and filled with thin, pale colored bile. On cutting open the diseased mass, in the transverse sinus of the liver, about an inch from the commencement of the commom hepatic duct, there were found several biliary calculi of different sizes, weighing in all about two drachms. They seemed to be inspissated bile, friable, of irregular shape, and indigo color—and emitted a strong, unpleasant odor on combustion. Considerable quantity of a greyish purulent fluid was found in the cavity where they were lodged.

All the internal organs were tinged with yellow, and the inflammation had even extended to the bladder.

[*To be continued.*]

ART. IV. *A Case of Orchotomy, (or the Removal of a Diseased Testicle,) in which the Spermatic Vessels were secured in the Inguinal Ring, and the patient recovered.* By ABNER HOPTON, M. D., of Clinton, N. C.

JOSHUA HANEY, a stout bony man, aged 50, or thereabouts, applied to me for the purpose of having an operation performed on him for the removal of a diseased testicle. The disease had lasted seven years, in despite of every expedient which had been devised for its removal. The gland had become so enormously enlarged at the period of his application, that it was not only to him a source of extreme pain and irritation, but of great inconvenience; he was compelled, therefore, as the only alternative, (and truly a deplorable one,) to submit to the operation of orchotomy.

The operation was performed in the usual way. But, unfortunately, I found that, owing to the morbid state of the spermatic cord, and the extensive development of the disease, I should be compelled to secure the spermatic vessels within the abdominal canal; this was accordingly done, and, to my utter astonishment, the patient, after a tedious convalescence, and several relapses, finally recovered.

I wish to call the attention of the faculty particularly to this case; as I am induced to believe it has never hitherto proved successful. Mr. Averill observes, that in no case has this operation succeeded, and, therefore, deems it cruel to submit the patient to the pain of an operation where there is no prospect of relief. M. Lisfranc informs us, that in cases of this kind he has seen M. Dubois pull down the cord and then divide it; and M. Dupuytren cut up the inguinal canal to the internal ring, and there cut through the cord, but in all the cases the patients died. I am aware, also, that sir Astley Cooper, and others of no less celebrity, condemn the practice. But, in this instance, there was no other course left me to pursue, except it was to trust the case to the precarious operations of the "vis medicatrix naturæ." But this I was determined not to do; as I was thoroughly convinced that the instinctive principle, or remedial power, of nature, was here, notwithstanding her many resources, inadequate to the removal of such an extensive and virulent disease; a disease which had resisted her restorative operations for upwards of seven years. Hence, rather than submit the case to contingencies of this kind, I deemed it advisable, with the consent of my patient, to tie the cord within the ring, and

then trust the issue to the plastic hand of nature: the result of which is, that my patient has perfectly recovered.

ART. V. *An Attempt to form an Artificial Eyelid, which happily succeeded.* By ABNER HOPTON, M. D.

A BLACK BOY of Mrs. Hall was gored on the forehead by an ox; the point of the horn had entered between the superior palpebra and ball of the right eye, in such a manner as to tear off the lid from the superciliary ridge, and to leave it hanging by a small filament of skin at the outer canthus.

Several attempts had been made to unite, or restore, the detached eyelid, but as all the efforts at restoration had proved abortive, the boy was at length brought to me for such aid as the case would admit of, or I might judge necessary or advisable.

The following expedient was devised for the formation of a new palpebra: After removing all the morbid appendages from about the eye, I separated the integuments from the superciliary ridge, removed the ulcerated edge of this by sharp scissors, and then cut off the tarsus from its morbid connexion with the external angle, and removed its ulcerated edge also; I now, by means of fine spiral stitches, (glovers' suture,) united the raw edge of the tarsus to the superior fold or integument of the superciliary ridge. I was particularly solicitous in preserving the tarsus, in order that the cilia might be preserved; for, without it, the appearance would be rather unsightly. Upon examining the eye a few days after, I was delighted to find that adhesion had taken place, and that this simple device had succeeded better than I could have expected. The boy has now a very sightly eyelid, answering all the purposes of a natural one.

ART. VI. *Case of Internal Strangulated Hernia with Post Mortem Appearances.* By E. PIERCE, M. D., of Athens, New York.

MR. P., the subject of this unfortunate case, was aged 24; active and muscular, but temperate and regular in his habits, and of a sanguineous temperament. On the 4th of May, 1829, without any previous indisposition, and while engaged at his usual occupation, (waggon making,) he was seized with a pain in the umbilical region, which, after a short con-

tinuance, had all the characteristics of the most violent and excruciating colic. The cathartic which he had taken about two hours before I saw him, had been thrown from the stomach, and the pain, with slight remissions, was recurring in paroxysms of increasing intensity. Cathartic injections were now used, and tinct. morph. was given in large doses. The injections soon produced copious stools, of a natural consistency and of a healthy appearance. But no sensible relief was afforded either by the evacuations or the anodynes, and it was evident that only the large intestines had been moved. He was now bled *ad deliquium*. Decoct. senna and salts was thrown up as an injection, and calomel, in fifteen grain doses, was given every twenty-four hours, followed by oil ricini, in ʒiss. doses. These were retained till after the second dose of the oil was administered, when vomiting again returned. The bleeding produced a little mitigation of the pain, but only for a short interval. Warm baths had no better effect. Hot fomentations of the parts affected had been persevered in from the commencement of the attack. After the first eighteen hours the pain was partially lulled, but the soreness and distention of the bowels was increasing. Venesection was three times repeated. The pulse, which was small at the first, rose but slightly after the first and second bleedings, but not at all after the third or fourth. A large epispastic to the abdomen and tobacco injections had no better effect than the other remedies. Frequent vomiting of feculent matter, sinking of the pulse, and coldness of the extremities, now indicated the near approach of death—which took place forty-four hours after the commencement of the attack. Some mechanical obstruction was suspected, and leave obtained for post mortem examination.

Appearances on dissection two hours after death. The examination was made in presence of Dr. Benton and my brother. An incision was commenced at the lower extremity of the sternum, and continued down to near the umbilicus, branching thence to the anterior superior spinous processus of the ilium. The flap was thrown down, and about a quart of bloody fluid removed from the cavity by a sponge. All the parts in view were in a high state of inflammation. The ileon was much distended. Following with the fingers the iliac mesentery downwards, a firm band was felt at the cæcum, where this intestine is tied down to the internal iliac muscle, or rather to the left of this, and more directly over the spinal column. Throughout this band, a portion of the ileon appeared to have passed, but the nature of the mischief was not fully apparent

till the hand was passed under the base of the flap, when a portion of the ileon, of about twenty inches, was thrown up in a perfectly mortified state. It was now evident that this portion of the gut was completely strangulated. The band could be seen entirely surrounding it, and drawn so tight, that a small probe could not be passed under it without difficulty. A little farther examination proved this band to be formed by a twist or coil of the processus vermiformis of the cæcum. The extremity of this processus, beyond the portion occupied as the band, (which was about two and a half inches,) was the size of the ileon strangulated, and in a state of gangrene. The extreme end of this appendix was tied down directly over the left internal iliac muscle, by a small round ligament, three or four inches in length, which appeared to be composed of the concentrated and prolonged peritoneal covering of the processus.

This must probably have been a *lusus naturæ*, as this patient never had any former disease of the intestines. The only case which I have ever read bearing any analogy to this, is found in the the 7th vol. Med. Chir. Review. In this case, a portion of the ileon had passed through a band, or bridle, as it is termed, became strangulated, and caused the patient's death. No account is given of this bridle, except that it was a morbid production, supposed to be the consequence of enteritis, to severe attacks of which the patient had suffered some years before. In the lectures of sir A. Cooper, by Mr. Tyrrell, the possibility of such a case is admitted; and mention is made of a preparation in the museum of Guy's Hospital, of a large portion of the ileon thus strangulated. This distinguished lecturer remarks that as these cases cannot be known but by post mortem examinations, they are therefore beyond the reach of surgical aid.

Dr. Johnson, in his report of the case above mentioned, would seem to regret that he had not followed the example of the German surgeon, and attempted to relieve his patient by an operation. On the failure of a reasonable perseverance in other means, and no proof of mortification existing, if the patient can place his finger on the part affected, and should that part be the anterior or either of the lateral surfaces of the abdomen, and still further distinguishable by circumscribed hardness and soreness, an operation would offer a fair chance of relief; and under such circumstances should always be proposed. But few patients, I fear, would submit to it, till inflammation had gone too far to permit a cure by an operation, even could the obstruction be

removed. In the case of my unfortunate patient, the stricture was too deep to be released without the introduction of the whole hand, and there were no external marks indicative of the seat of the affection.

ART. VII. *Practical Observations on Punctured Wounds.* By JAMES FOUNTAIN, M. D., of Yorktown, Westchester County, New York.

ALTHOUGH large wounds are often appalling and dangerous from their extent or the importance of the part affected, yet in none is the peril so frequently hidden as in the punctured, especially if inflicted with a fine, piercing instrument. Unless some considerable hemorrhage ensues, such cases seldom attract much attention until the sympathies of relations are awakened, and some violent nervous affection announces the time lost. It is a singular circumstance, and one well calculated to lull the wounded into a fatal security, that these apparently trivial lesions, even without any remedial means, are often productive of no inconvenience whatever. I have known a pitchfork to be thrust into the foot without any subsequent injury, while the puncture of a pin has more than once produced tetanus, and the slightest stab of a penknife near the knee joint has been productive of the most hideous inflammation, mortification, and even death.

Punctured wounds are liable to produce two morbid processes, excessive inflammation and tetanus, either of which it is the duty of the surgeon to prevent when timely consulted, or to mitigate or remove when they are developed.

When violent inflammation is about to supervene, sometimes after an indefinite interval of ease, at other times immediately after the accident, the patient is seized with violent pain in the part or near it, followed by rigors, amounting frequently to shivering, a sinking of the pulse and powers of life generally, with a deathlike coldness of the extremities; the suffering is intolerable; he writhes, groans, sighs, and shivers, and vomiting frequently ensues. The wounded part is neither tumefied, hot, nor tender to the touch; at length, after some hours of indescribable suffering, the powers of life begin to rally, and a most violent inflammation is developed, followed frequently by extensive suppuration or mortification, and death of the limb or of the whole body is the consequence.

From this history, which is the result of observation, it is evident that three morbid conditions are likely to obtain; they may be called—1st, the irritative; 2d, the inflamma-

tory; 3d, the suppurative; and these three conditions may be developed in a greater or less degree in all wounds, concussions, and contusions, except in cases followed by tetanus. This last effect appears to be an extension of the first stage, and a consequent perversion of the laws of the animal economy, and death ensues from the general perturbation or interruption of the process of respiration. When tetanus is about to supervene, no pain is experienced, and this may, perhaps, be deemed an objection to the term "irritative." But it must be recollected that the nervous system may be irritated, at least its motive portion, without any manifestations of the sensorium; thus, epilepsy has been kept up by a spiculum of bone in the cranium, or by worms in the alimentary canal, without any *sensible* irritation.

From established pathological doctrine, confirmed by clinical observation, it is fairly inferable that the first stage is the cause of the second; consequently, to prevent the first, is to parry all the direful consequences that so frequently follow in train.

From the foregoing premises it must appear evident, when opportunely called, that our first and all important object must be to prevent or mitigate nervous irritation. Taking into consideration the state of the system during the first or irritative stage, who would attempt by bloodletting still further to enfeeble the recuperative effort of sinking and perturbed vitality? Yet such a procedure is inculcated by surgical writers. Dr. Samuel Cooper observes, that "For the *first stage* of punctured wounds, the indication is to guard against the attack of violent inflammation." So far, very good; but now for the means: "Where no considerable quantity of blood has been lost," continues he, "*general and topical bloodletting* should be practised." This grand error of Dr. Cooper grew wholly out of his want of discrimination between *preventive* and *curative* measures. Instead of "guarding against the attack of violent inflammation," he is prescribing for its removal. These means are well calculated for the second or inflammatory stage, but they are directly the reverse of what they ought to be in the first.

When no large artery is wounded, I have always found the indication in the first stage to be, to raise the action of the vascular system, either locally or locally and generally, till the excitement is sufficient to overcome the nervous irritation, and, at the same time, in violent cases, to allay nervous irritability. The means of fulfilling this indication are stimuli and anodynes. As a stimulus, caloric, or heat, holds preeminence, and is the most natural. The wounded

part should be immediately and thoroughly heated through; and the most eligible method of accomplishing this object is by hot spirituous fomentations, or through the medium of hot poultices. A quantity of tobacco, when at hand, should be boiled a few minutes, and Indian meal added till it is of a proper consistence, and a large quantity applied as hot as can well be borne. By a large quantity, I mean not the size and thickness of a dollar merely, but a poultice six inches or so square and one thick. This should be kept hot by holding over it a heated shovel or some such instrument. If the whole system sympathizes, and the pulse is feeble, the surface and extremities cold, a large anodyne should be administered, followed by frequently repeated doses of camphorated spirits, ether, aqua ammoniæ, and hot vegetable infusions; and heated bricks, or jugs of hot water, should be applied to the extremities and back, until all chilliness and pain vanish and a universal sweat prevails. An aged and respectable neighbor of mine told me he had never known any injurious consequences to arise in his numerous family from punctures, which were common among them; and his mode of prevention was immediately to place a fold of muslin, wetted with vinegar, over the wound, and apply to this a case knife as hot as could be endured—wetting the rag and heating the knife every few minutes for half an hour. This being done no danger was apprehended; and the practice, though not quite so ceremonious as local bloodletting, was quite as philosophical.

The celebrated Dr. Dorsey, of Philadelphia, indeed, mentions stimulating treatment, but he introduces it so circumstantially as to render it unimportant. He observes, "When punctured wounds occur *in extremely hot weather*, it is safest to apply stimulating substances to *excite inflammation*." This short sentence of the professor, I must be permitted to say, carries with it several erroneous ideas. The heat of the weather being a stimulant, less additional stimulus becomes necessary. The warmth of the season does not, therefore, render wounds more, but less capable of producing tetanus. The inhabitants of warm climates being more irritable, a proper degree of stimulation is, with them, more imperiously demanded. In this climate, however, people in health are no more irritable in summer than in winter, for tetanus occurs quite as often in the latter* as in the former season. So

* The author of the introductory discourse to Dr. Gregory's Practice of Physic observes, that "tetanus, in this climate, never occurs in winter." This error arose from the sweeping manner in which this discourse was

that, following Dr. Dorsey, a due degree of stimulation would, most probably, be neglected in cold weather, when it is most required.

I must beg to transgress my limits so far as to observe, that nervous irritation is the first effect, not only of punctured wounds, but of all others, as well as concussions and contusions, and that it requires a corresponding course of treatment—I mean stimulation. This stage not unfrequently continues several days, especially in elderly people and in cold weather. An aged gentleman told me he felt an instant aggravation of pain on being bled for a concussion, which, the doctor said, proceeded from the *starting* of the blood which had been stagnated.

A young lady from New York was thrown into the most violent spasms by being bled on a cold day immediately after having been thrown from a sleigh. To obviate these spasms warmth was applied, and she was thus partially relieved only, however, to be bled down again on the second and fourth days. I was called in on the fifth, as her surgeon told her she must be again bled. I prescribed Dover's powder ten grains, camph. four grains, every four hours, with a warm foot bath, hot infusions, and bladders filled with warm water, applied to her shoulders and side, and every precaution to be taken to warm her thoroughly. In twenty-four hours every pain vanished, and a cathartic finished the cure. Notwithstanding this length of time, on a scrupulous examination, it was evident she was still laboring under nervous irritation.

2d. *Inflammatory stage.* Inflammation having been developed, the first question which arises is, whether it can be reduced, or whether it must proceed to suppuration. If vascular action is so excessive as to threaten gangrene, every means of reduction must be put in requisition; bleeding, leeching, purging, antimonials, and cold applications should succeed each other in rapid succession, or be instituted simultaneously. When there are no apprehensions of gangrene, and suppuration appears inevitable, these antiphlogistic measures should be used less vigorously and soon changed for emollient poultices, which should be large, soft, and unirritating.

For the subsequent treatment of the various contingent effects of wounds, as also tetamus, I must refer to systematic writers, as their details would exceed my prescribed limits.

---

written. The son of John Hilliker, of Staten Island, died of tetanus in January, and two others in New York, to my recollection, died in the winter, of the same disease.

[Dr. Clements, an eminent veterinary surgeon of New York, also died of tetanus in the winter season.—ED.]

With regard to tetanus, I would, however, observe, that from my experience and reading, I should trust the cure to full vomiting of tart. antim., followed by effective doses of opium, and blisters to the whole spine. A case of traumatic tetamus cured by tart. antim. will, at some future period, be given.

ART. VIII. *Fatal Case of Delirium Tremens.* By JOHN GORRIE, M. D., of Abbeville, N. C.

COMPARATIVELY frequent as delirium tremens has become, its nature, and, consequently, the best mode of treating it are not universally known to the medical profession. Instances, indeed, occasionally occur, of physicians who have never seen a treatise on the complaint; nor is this a matter of surprize, when nearly all the few accounts of it that have been published are only to be found scattered through a vast range of periodical works. Little attention as this deplorable affection has hitherto commanded, it will not be assuming an undue importance for it to say, that there is no disease in which the want of a generally acknowledged view of its pathology is more severely felt. Running its course, where in any degree violent, rapidly, and where injudiciously or inefficiently managed, almost always fatally, it demands an energy and a peculiarity in the treatment that would never be suggested by the general principles of medicine; and, indeed, verifying the maxim, that "general rules in physics kill their exceptions." The enormous extent to which an acknowledged specific, opium, must frequently to given to obtain its salutary control over the complaint, joined to the consideration that its administration must be tentative, produce, particularly with the mere routine practitioner, a predilection for less dangerous though less efficient modes of cure, or a timidity in its use that frustrates the end aimed at. Established rules for its exhibition, and the repeated evidence that the publication of cases may afford of their utility, can alone remove this timidity.

To aid in dispelling unnecessary fears, I am led to offer the following case to the notice of the public. Although unfortunate in its termination, it affords some view of the comparative benefit to be derived from different modes of treatment, and exhibits evidence, if evidence be necessary, that the pathology of delirium tremens depends upon a morbid irritation of the brain and nervous system.

The subject of this case was in the meridian of life, of a constitutionally athletic frame and vigorous intellect, both of

which had become enervated by long continued habits of intemperance. I was called to see him on the afternoon of Thursday, the 7th of last August. A member of the family informed me, on my arrival, that he had been slightly indisposed for two or three days previous, during which he had been bled and had taken a cathartic; and that, on that morning he had taken an emetico-cathartic of ipecac. and calomel, which had discharged from his stomach much bilious matter, and had been attended by what were considered alarming affections of the body and mind, as, an apparent inability to swallow, great depression of spirits, with some aberration of intellect. I found him complaining of considerable depression of spirits; his skin was cool and moist; pulse full, somewhat quickened, but easily compressed; tongue thickly covered with a yellow fur; bowels had not been freely operated on. Prescribed sixteen grains of calomel with a grain of opium, and directed these to be followed by pills of calomel, jalap, rhubarb, and aloes, of each equal parts, in doses of one every hour, until they should operate on his bowels. I also left a Dover's powder to be given after their operation; and directed that if the peculiar symptoms of the morning returned, he should be allowed spirituous liquor.

Friday. My patient told me he was better; the cathartic had opened his bowels freely; he had slept during the night, but not soundly; I found his skin moist, pulse full and soft, tongue cleaner than yesterday, but still furred; no return of the peculiar irritation of yesterday. Ordered a cathartic of pills of the same kind, to be taken as before, and to be followed by a Dover's powder after their operation.

Saturday. Was sent for early in the morning. On my arrival was informed by the family, that my patient had been delirious occasionally, since daylight. He stated that he had passed a horrible night; was suffering under great dejection of spirits, with the assurance that he was going to die; was very restless; complained of weakness and excessive nausea; skin cold and covered with sweat; slight tremors of the hands; weak, quick pulse; tongue loaded with a brownish yellow fur; eyes slightly suffused. The cathartic of yesterday produced sixteen stools of a bilious appearance, and its operation still continued. Prescribed a two grain pill of opium, warm toddy, and a mustard plaster to his stomach. Apprehending that I had before me a case of difficult management and great danger, I requested counsel; and Dr. Bonner, a distinguished practitioner, was sent for.

In the course of a few minutes my patient was attacked with delirium, accompanied with small contracted pupils,

great intolerance of light and sound, flushed face, throbbing of the temporal arteries, fulness of pulse, with a return of heat and dryness on the surface. Conceiving there was danger of his being destroyed by the great determination of blood to the head, I took about ten ounces of blood from the temporal artery, and applied mustard plasters to his feet. These means lessened the excitement of the brain, though they did not reduce that of the system.

At this time Dr. Bonner arrived. Regarding the excitement of the brain, as well as that of the general system, incompatible with the further use of opium, he advised the administration of assafœtida and carbonate of ammonia, in doses of five grains each, to be repeated every hour until the symptoms should be relieved. A dose of these medicines was given, and immediately rejected from the stomach with some bilious matter. Dr. B. now recommended the prompt administration of an emetic, which was prepared and left to be given by the family.

On my return to my patient, which was unavoidably protracted till after an interval of four hours, I found him in nearly an exhausted condition; there was a cold, clammy state of the skin; a rapid, small pulse; great watchfulness; with frequent vomitings and purgings. The emetic had operated, and it was succeeded, in the course of two hours, by the above spontaneous vomiting and purging. In accordance with the plan agreed upon, I administered a pill of assafœtida, and some carbonate of ammonia dissolved in toddy. My patient expressed great horror at the assafœtida, and refused to swallow any more; and, as it did not, nor was calculated to lessen the irritation of the stomach and bowels, and as the objection to opium, supposed to be present in the morning, no longer existed, I changed the prescription to laudanum and carbonate of ammonia. After repeated trials, I found that these medicines, in common with every other fluid, were obstinately rejected by the stomach. I now commenced giving crude opium; which I continued every half hour, without much regard to the size of the dose, though varying from one and a half to three grains, till, with the aid of an injection of laudanum, the vomiting and purging were allayed and sleep induced. This was about 12 or 1 o'clock in the night.

Sunday. Visited my patient at 7 o'clock in the morning, and found him asleep. Awaking soon after, he mentioned that he had been much relieved by the opium, and appeared to be comparatively free from his distressing disease. This appearance was, however, fallacious; for, in a little time he

complained of a return of nausea, which, in a few minutes, was followed by a recurrence of the vomiting and purging, with symptoms of returning delirium. I recommenced the use of opium *per orem et per anum*, in doses of two grains by the former, and a drachm of tincture by the latter, every half hour; the former of which I directed should be continued till he should fall asleep; and the latter, till the purging ceased.

Professional business required that I should absent myself (at nine A. M.) for about an hour from my patient, and circumstances intervened, over which I had no control, to preclude the possibility of my returning; so that, for the remaining history of the case, I am indebted to his friends and the physicians who subsequently saw him.

Dr. B. informed me he visited him at 4 P. M., that he found him in an apparently sinking state; was told he had not slept soundly since I left him; and that the purging, which had been suppressed in the early part of the day, was returning. He applied a suppository of twelve grains of opium, and increased the dose internally to three grains, with the addition of five grains of camphor. These doses appeared to revive him again; and, being unable to stay, he repeated my direction of the morning for their continuance.

The patient soon relapsed under the employment of this prescription; and a physician of considerable popular reputation, then in the neighborhood, was sent for. He arrived late in the evening. On receiving an account of the previous treatment, he gave it as his opinion, that where five or ten grains of opium failed to cure delirium tremens, a larger quantity would not have a salutary effect; and, of course, as four times the largest amount of this article had been given during the last twenty-four hours, it could form no part of his *methodus medendi*. The medicine in which he placed all his hopes of restoring the patient to health was ammonia. Under the use of this remedy, it is almost needless to say, the patient continued to sink rapidly; and finally expired soon after midnight.

This case I view as of so interesting a character, that I cannot forbear subjoining a few remarks.

Considering delirium tremens as existing sometimes under so mild a form as to be amenable to an exercise of the general principles of medicine, I did not think that the few slight symptoms which were reported to have been present in my patient, on the morning of my first day's visit, called for any peculiarity of treatment. The absence of every symptom of irritation, and the subsidence of the effects of his bilious derangement that I observed on my second visit, proved to ap-

pearance the correctness of this opinion; and, indeed, I had such good reason to think my patient was then but little indisposed, that I thought my further services unnecessary, and told him I should not visit him again unless sent for. Whether I was deceived in supposing the disease had no existence when it was only masked, I am unable to judge; but it was an event, against which my previous knowledge of the habits of my patient had prepared me to guard; and if I were deceived, I must view it as a strong proof of the insidious character of the complaint. Under either view the disease cannot be considered as having manifested itself plainly previous to Saturday, or the night before. It was then developed in a violent manner. The several stages of oppression, excitement, and collapse, ran their courses rapidly, and were more distinctly marked than in any case which I had before seen, or of which I recollect to have read. The vomiting and purging were features of this case which, so far as I know, have not been described as belonging to delirium tremens.

Judging, at this period of the event, of the relative advantages derived from the different kinds of treatment pursued, when the nature of the case became obvious, it affords another evidence, to those already before the world, of the great remedial power of opium in delirium tremens. Of the medicines employed, it was the only one that exerted the least beneficial effect on this case; and, from the irritation so plainly manifested throughout its course, I feel assured it was the only article of the materia medica, whose operation is understood, that afforded a fair prospect of effecting a cure. That it was not successful must be attributed to too much timidity in its administration. The unfortunate result of this case has convinced me that in this disease, as in some others, the operation of opium in a state of health, or in ordinary states of disease, should be almost disregarded; and that there should be no stopping point to its continuation but the subsidence of the irritation of the brain, which constitutes the disease. Although the production of this effect should be the only end to its administration, yet it must not supersede an attention to the quantity given at a dose, and to a due interval of time between the doses; for here, as in health, though the quantity given must be beyond comparison larger, opium may exhaust the entire as well as allay the increased energy of the sensorium. It will be impossible, from the diversity in violence which the disease presents, to lay down a rule for the administration of opium, that will be applicable to every case, but a good general one would be to commence with a minimum dose of at least two grains, and increase it,

in arithmetical ratio, at intervals of an hour, till sleep be induced. If this course had been pursued with the above case, I entertain as little doubt as human reason applied to an event of this nature will admit, that I should have been able to have saved my patient.

ART. IX. *Casses of Polysarcia Adiposa in Childhood.* By JAMES McNAUGHTON, M. D., Professor of Anatomy in the University of the State of New York.

THE subjects of the following observations are at present exhibited in this city, on account of their extraordinary size and weight. In the last particular, they are very remarkable, and have scarcely been exceeded by children of the same ages in any part of the world.

They are natives of Dutchess county, in this state, and belong to the same family. Their parents are not above the ordinary size, but of good constitutions, and in rather humble circumstances. The children being in a great measure helpless from their unwieldy bulk, require the constant attention of their parents, who, on that account, and their narrow means, are reluctantly compelled to resort to the disagreeable expedient of exhibiting them to the public, for the purpose of earning a livelihood. My principal object in writing this notice, is to call the attention of the curious and charitable to these unfortunate but interesting children.

The elder sister, Susannah Tripp, is in her sixth year. When five years and eight months old, she was three feet ten and a half inches high, and measured four feet two inches around the waist, eighteen inches round the arm, twenty-one inches below the knee, and weighed 203 pounds.

The younger sister, Deborah, is in her third year. At the age of two years and ten months, she was three feet four inches high; around the waist, three feet nine and a half inches; around the arm, fifteen inches; below the knee, sixteen and a half inches, and weighed 119 pounds.

These children, at the time of birth, were not above the common size; neither, it is thought, having then exceeded seven pounds in weight. They continued to grow like other children, until the fourth month, when the rapid growth in both cases became remarkable. The elder girl, at the end of four months after birth, weighed twenty-five pounds, when a year old sixty, and when two years eighty pounds, which is about the weight of ordinary girls at the age of puberty.

Soon after this period, she had an attack of fever which, for a short time, retarded her growth; but after her recovery she grew even faster than before. She still continues to grow, but the parents seem to think with less rapidity than formerly. But it is somewhat doubtful how the fact stands, as she has a very great aversion to being weighed, being apparently aware of her monstrous bulk. Her enormous weight is principally owing to the great accumulation of fat; but her whole frame is much more developed than is usual at her age. The bones of her wrist are apparently as large as those of an ordinary adult male. She also possesses much more muscular force than is usual; she, indeed, grasps and pulls with the force of a full grown woman, when she chooses to exert her power. The only deformity about her is the bending of her legs, which have yielded to the heavy weight they have had to sustain; the bones being yet soft, and imperfectly ossified. This deformity, together with her great weight, render her almost incapable of walking without support. To the same circumstances, her comparatively slow increase in height is attributable. In all other respects, she seems to enjoy the most perfect health. Her disposition is variable, often ruffled by the most trifling causes; but, upon the whole, she seems among acquaintances cheerful and happy, and not unfrequently merry.

The younger sister, Deborah, is very lively and playful, and, considering her bulk, quite active. She too, however, begins to feel the effect of her weight, in the bending of her legs; but the deformity is much less perceptible than that of her sister. With the exception of the legs, these children are well formed, and even handsome. They both have dark auburn hair, hazel eyes of beautiful expression, with rosy cheeks, and soft smooth skins, resembling, however, the skins of plump females over twenty, more than those of children. Indeed, it is almost impossible at first sight to realize that they are children. Their large size, broad plump shoulders, and prominent breasts, impress the beholder with the idea of their being full grown women. But in all their feelings and actions they are mere children. When we first visited them, the younger child took possession of a handsome cane belonging to one of the spectators, and then in great pride strutted with it through the room, and was persuaded with some little difficulty to relinquish it. Subsequently, the sisters had quite a serious misunderstanding respecting a few marbles, and some strings. In children of their ages, we would not be surprized at such

occurrences; but their adult appearance rendered their quarrel about such trifles indescribably ludicrous. However, although mere children in understanding, yet I am inclined to think they are equal to ordinary children of the same ages and opportunities, in point of intellect; indeed some of their observations indicated a degree of shrewdness above their years.

According to Haller, the mind, in cases of extremely rapid growth, seldom keeps pace with the body in its development; for, he observes, speaking of this subject, "*mens solet infantilis manere.*" There does not appear any approach to puberty in either, as in many of the cases of early growth recorded by Haller in the 8th vol. of his Physiology: they seem to have no feelings or inclinations but such as belong to ordinary children of the same ages.

Both these children passed through the period of infancy without any serious disorder, and seemed to suffer even less than ordinary children from the process of dentition. They have never had the measles or hooping cough, and seem to be subject to no complaint, except cough, from slight exposure to cold, and occasional diarrhœa. They have enjoyed almost uninterrupted health thus far, and been blessed with keen appetites and good digestion; and have never been stinted in their allowance of food and drink. In their diet, there has been nothing peculiar: it has been such as children are usually fed upon in the country; and that, I believe, means every thing they take a fancy to that is used in the family. There seems to be no particular diet for children after two years of age, different from what is used by adults; to which negligence, doubtless, many of their diseases, then and afterwards, must be attributed. The mother thinks that they eat and drink rather more than ordinary children, to which I am willing to give credence, from what I have seen of their powers in these respects.

Their sleep is soft and easy, and does not exceed the ordinary duration. They have uncommonly strong pulses, such as I have never felt in children, and not very often in adults. This indicates great vigor of the heart and arterial system. I observed, also, that although the weather was very warm, the thermometer being between eighty-five and ninety degrees in the shade, they seemed to perspire much less than other people. Upon questioning the mother on this point, she informed me, that they seldom perspired much, and that they seemed to suffer no more inconvenience or oppression from the greatest heat of summer than thinner children; neither are they subject to excoriations of the skin

where surfaces are habitually in contact. This can only be attributed to the remarkable smoothness and delicacy of their skins, and to the scantiness of perspiration.

I am inclined to attribute the extreme corpulency of these children chiefly to a few of the circumstances already mentioned: namely, a good appetite and digestion, a powerful circulatory system, a sparing transpiration, inactivity of body, and easy minds, exempted from sickness, from care, and from trouble. The operation of all these circumstances is favored by constitutional predisposition to obesity, and by what is always indispensable to the production of such a state of body—abundance of nourishing diet and drink. That all the circumstances above mentioned favor obesity, the most eminent physiologists and pathologists acknowledge.*

Beclard mentions the influence of a humid atmosphere on birds (which must operate by diminishing transpiration) to be so great, that they have been known to have become fat under it in the space of twenty-four hours.†

If such be the case with birds, there is no reason why a sparing perspiration should not favor obesity and growth in general in the human species. I am inclined to believe that the growth of the subjects of this paper is, in no small degree, referable to that peculiar condition of the extreme vessels, with which their limited perspiration is connected. What this precise condition is, it would be futile to attempt to explain. We cannot penetrate so deeply into the secrets of nature—the door is closed against us.

On the mother's side there is an hereditary predisposition to corpulency. She informed me that several members of her family have been remarkable for their size. She has a brother in Canada who weighs upwards of 300 pounds; and she herself has exceeded 227, though at present she must be much short of that weight. This predisposition, in whatever it consists, must be regarded as the most powerful cause of the excessive growth of the children. Without it all the causes favorable to obesity, above mentioned, would be insufficient; for we often see them in combination, as much as in these instances, without the same result. Since it is out of our power, however, to explain the essence of any function, it would be a waste of time to speculate on phenomena purely vital. Peculiarity of constitution can no more

---

* Adelon, Physiologie de l'Homme, tom. iii. p. 576. Haller, Elementa Physiologiæ. tom. 8vo. lib. xxx. McLean on Hydrothorax, p. 179.

† Anatomie Generale, p. 168.

be accounted for, than the color of our hair, or the expression of our countenances. I shall, therefore, leave the explanation to those who have more leisure, and can see farther into the arcana of nature. It may not be unworthy of remark, that there are two or three other children, belonging to the parents of the subjects of these remarks, who are not larger than what is common.

There are, on record, many instances of extreme obesity. Individuals have, now and then, been found weighing from 400 to 700 pounds and upwards. Some are said to have weighed 800 pounds; but I have not seen any particular history of any individual who was so heavy. Daniel Lambert, who, at the time of his death, weighed 739 pounds, was, perhaps, the heaviest of whom we have any authentic account. Extreme corpulency is most apt to occur towards the decline of life; instances of it are comparatively rare during childhood. Haller, however, mentions several such cases in the 8th vol. of his Physiology; many of them were also instances of early puberty. In his list, however, there are but two that can be compared to our subjects in regard to weight: one of these, a boy five years old, weighed 250 pounds; and another, a boy of three years old, 140 pounds. Tulpius, too, mentions one instance in which a boy of five years weighed 250 pounds. Upon examining the authorities quoted, I find that this is not the case quoted by Haller. These American children, therefore, have scarcely ever been exceeded in size or weight, in any part of the old world; and may, perhaps, at the present time challenge a comparison with the largest children of the same ages in Europe. Had Buffon seen them, he would have thought that the offspring of the human species, at least, did not degenerate in the new world.

Visitors have uniformly expressed a great desire to know what would be the probable fate of these children—whether their growth would be likely to continue in the same ratio until the adult period; and if it did, whether they would be likely to live long? According to Haller, children of this kind are generally short lived; but occasionally their inordinate growth ceases early. Speaking of such cases, he says, "Plerumque ejusmodi precoces pueri brevis ævi sunt. Est etiam, ubi nimium hoc incrementum mature, et a sexto anno cessavit."*

When obesity has continued for a considerable length of time, and has exceeded certain bounds, it brings on a train

* Elementa Physiologiæ, lib. xxx.

of evils, such as to render life a burden. It is injurious to the most important functions of the animal economy. Locomotion becomes difficult, and even impracticable; respiration becomes laborious and difficult; hence, asthma, cough, dyspnœa, &c. The sleep becomes disturbed with nightmare and frightful dreams. The function of digestion becomes impaired, causing colic and diarrhœa; and, finally, unless the sufferers are suddenly carried off in a fit, or by an inflammation of the chest, they become dropsical, and thus terminate their miserable existence.*

Since, then, such grievous evils proceed from obesity, and since the circumstances which favor its increase are never known, it is the interest of all persons predisposed to corpulency, to take the necessary precautions to guard against its accession; and it is the duty of parents to adopt similar measures to prevent their children from becoming victims to appetite and indolence.

The great means of preventing corpulency where there is a strong predisposition to it, and of removing it when it already exists, consists in abstaining from rich fat meats and malt liquors, and substituting a spare diet, consisting of vegetables and farinacious articles, drinking nothing but water, and that sparingly; abridging the quantity of sleep, and taking it on a hard bed; and in using active regular exercise in the open air. Medicine should only be used to relieve particular symptoms.

The life of the Italian nobleman Cornaro, and the history of the fat miller of Essex, recorded by sir George Baker in the 2nd vol. of the Transactions of the College of Physicians of London, are worth volumes to those subject to the evils arising from obesity. They show most satisfactorily that even when the tendency to corpulency is excessive, it can be regulated completely by exercising sufficient self denial. There are but few, however, who have firmness enough to pursue such a rigid course as is necessary; hence they fall victims to their own appetites. And there is too much reason to fear that the poor children, who are the subjects of this paper, are destined to an early grave.

---

* Jansen, Consideratio Physiolog. et Path. Pingued. Animal p. 126. McLean on Hydrothorax.

REVIEW.

ART. I. *Elements of Pathology and Practice of Physic.* By JOHN MACKINTOSH, M. D., Acting Surgeon to the Ordnance in North Britain, Lecturer on the Practice of Physic in Edinburgh, &c. Vol. I. 8vo. pp. 484. Edinburgh, 1829.

THE same reasons which moved Boerhaave and Cullen to publish systems of the theory and practice of physic, are assigned by Dr. Mackintosh for the appearance of the present work. The chief object is modestly stated to be to furnish those students who attend his lectures with a text book, but the author does not hesitate, at the same time, to acknowledge his confidence that his work will, "with all its faults and imperfections, be indulgently received by the profession, as an humble attempt to establish a pathological system of medicine." So Dr. Cullen, after informing us that, in imitation of his great predecessor Boerhaave, he was desirous of supplying his class with a book of reference, adds that he was further induced to undertake the task "because in every branch of science with respect to which new facts are daily acquired, and these consequently giving rise to new reflections, which correct the principles formerly adopted, it is necessary from time to time to reform and renew the whole system, with all the additions and amendments which it has received and is then capable of." While Dr. Cullen, however, undertook the task, of which he acknowledged the difficulty, with great and becoming diffidence, and spoke of the errors of his predecessors with respectful forbearance and indulgence as the inseparable attendants upon the limited discoveries made in their time, Dr. Mackintosh, with little veneration, and an unmerited and unbecoming harshness, denounces Cullen's First Lines as "a mass of error and an unpathological system of medicine, which it would be absurd to reprint in the present state of science." Cullen foresaw, with

the prophetic eye of a philosopher, that his system "would, like all other systems, hereafter suffer change;" but he could scarcely have anticipated, that in forty-six years after he had set the last seal upon his golden work, an eleve of the very school which his genius may almost be said to have created, and which it undoubtedly elevated to the loftiest pinnacle of usefulness and splendor, would denounce that work in such unqualified terms. That immense advances have been made in pathology since the time of Dr. Cullen; that unsuspected sources of disease have been developed by the knife of the morbid anatomist, and bolder and more successful methods of treatment adopted; that the taste for the speculative hypotheses which formed so prominent a feature in his writings has become almost obsolete; and, moreover, that his own peculiar doctrines find few, if any, supporters at the present day, we are not disposed to deny. But we must insist upon the undeniable fact, that, notwithstanding the improved condition of medical science, the First Lines of Dr. Cullen have not yet been equalled, much less surpassed, by any elementary treatise which has succeeded it. Its masterly descriptions of disease, its accumulated stores of valuable and interesting facts, its chaste, vigorous, and classical style, and the acute power of discriminating and classifying diseases which is displayed in its every section, still recommend it as the most valuable text book for the student and teacher of medicine. We are not alone in this opinion, nor does Dr. Mackintosh express the opinions of all his professional brethren in Great Britain. Dr. Gregory, in his Elements of the Theory and Practice of Physic, a work which deserves, for its modest and unpretending style and its vast learning, to rank next to the First Lines of Cullen, avails himself of every opportunity to render justice to the various merits of that great physician, and boldly, and, as we think, justly, pronounces his system to be founded on a close observation of the phenomena of disease, and that it will forever continue to be the surest basis of any elementary view of the theory and practice of physic. Dr. Mason Good, whose acquirements and literary judgment have been unsurpassed in the present generation of physicians, has likewise borne his testimony to the merits of Dr. Cullen, and emphatically deplores the fashion which has been growing both at home and abroad of making exaggerated exposures of his defects. To those who concur in the opinion entertained by these high authorities of the value of Cullen's labors, it will be gratifying to learn that a new edition of the First Lines has already appeared in part at Edinburgh, containing a view of the most

important facts which have been ascertained, and principles which have been adopted in regard to the nature and treatment of diseases, since the death of the author. The edition was commenced by the late Dr. Wm. Cullen, grand nephew of the author, and, after his decease, which took place a few months ago, continued by Dr. James Crawfurd Gregory, son of the late celebrated professor of the practice of physic in the University of Edinburgh. In this work all the additions made to pathology have been carefully noted, and ample references made to all authorities that have appeared since the death of Cullen. We have not, as yet, seen this work, but are indebted for the information we have of it to our very able and learned contemporary, the Edinburgh Medical and Surgical Journal. We have been induced to notice it because we wish the profession in this country to be aware that Dr. Cullen is not altogether forgotten, even in the very centre of his glory, as certain systematics would fain have them believe, and we would guard them against that dangerous spirit of innovation which would displace the works not only of Cullen, but of Huxham, and Pringle, and Morgagni, and Sydenham, as valueless encumbrances on the shelves of a medical library.

According to those who cherish this exclusive spirit, no treatise of medicine before the time of Bichat deserves to be consulted. Symptomatology, in short, goes for nothing in their creed. It makes but a sorry and inconsiderable figure in their writings, which are altogether devoted to pathological descriptions. Now, this we humbly conceive to be a capital error, calculated to retard the progress of medicine, so far as its resources are to be made available not merely for ascertaining the precise tissue in which any individual disease has its seat, but for establishing rational and efficient methods of treatment. This last object is, or should be, after all, the main scope and design of our professional labors, whether in the closet or at the bedside, and yet we fear that this has been too frequently lost sight of in the over anxiety to pursue pathological investigations. Upon what other supposition can we explain the inefficient and vascillating practice pursued by those whose only aim appears to be to fill huge volumes with cases of disease illustrated by dissections? The symptoms are lightly passed over, with the exception of one or two, which either are, or are assumed to be, always present and sufficient to account for all the others, and for the result as developed in post mortem examination. The materia medica is for them a dead letter—a blank. A few leeches and sundry gallons of gum water constitute all the expedients of their art. Inflammation is the caduceus that,

with its magic touch, enchants every thing with which it comes in contact.

What then? it may be asked: Are we opposed to pathological research, and do we underrate the labors of Bichat and his eminent successors? Far from it. None are more ready to acknowledge the almost magic influence which his splendid and successful researches, conducted in the true spirit of the inductive philosophy, and shedding a flood of light upon the most obscure subjects connected with a knowledge of the animal economy, have exercised over the progress of our science, impelling it forward in the march of improvement, and imparting to it a character of almost mathematical precision, which promises the most brilliant and lasting results. But while we accede to modern pathology all that its most ardent votaries can claim in its behalf, we must raise our solemn protest against the wanton extinction of those beacon lights which successfully guided our predecessors in their arduous attempts to combat disease. All that we demand is, that the lights of ancient symptomatology and modern pathology be blended; their united lustre will pour the beams of noonday upon the hitherto darksome paths of medicine, which must ever remain imperfectly illumined, if deprived of either source of light. While, therefore, we would wish that the works of Bichat were made a manual and text book in the hands of every student and practitioner of medicine, and would impress upon their minds the absolute necessity enjoined upon them by considerations of duty and their hopes of success, of availing themselves of every opportunity to instruct themselves in morbid anatomy, and of uniting in one concerted and zealous effort to render these opportunities as frequent as possible, by dispelling the mists of prejudice in which the public mind in most countries is still involved upon the propriety of a general dissection of bodies after death, we must at the same time remind them that, for accurate descriptions of disease, and for masterly lessons in clinical medicine, they must still revert to the time honored depositories of medical learning and facts, of which no changes of theory, however dazzling, and no additional discoveries, however brilliant or wonderful, can ever lessen the value or impair the utility.

From the digression into which his unqualified and unwarranted denunciation of Cullen's First Lines betrayed us, we now return to Dr. Mackintosh, and shall consider his chapters seriatim. The first volume only of the Elements has appeared. It is divided into four parts; in the first part the pathological history of inflammation and fevers is consider-

ed; in the second, the diseases of the digestive organs are treated of; in the third, the diseases of the organs connected with respiration; and in the fourth part, the diseases of the circulating system. In the present article we shall confine ourselves to a consideration of the first and a portion of the second part, reserving the remainder for our next number.

Inflammation. Reversing the order pursued by his predecessors, Dr. Mackintosh discusses the subject of inflammation before that of fevers, and, perhaps, considering its greater simplicity, this arrangement may be the best. A spirited review is taken of the different doctrines which have obtained on inflammation from the time of Boerhaave, and the author then proceeds to unfold his own views.

Two opinions divide the profession at the present day on this subject. According to the one, inflammation consists in an *increased* action of the capillaries; according to the other, in a *diminished* action of the same vessels. Dr. Thomson, who entertains the first notion, applied salt to the foot of a frog; the first effect was to increase the velocity of the blood, to distend the vessels, and deepen their red colors. After the cause had been applied for some time, the red globules became less distinct than before the application of the salt, and, as he supposed, from the too great rapidity of their motion. Dr. Wilson Philip, who made the same experiment, came to the opposite conclusion, and decided that where the inflammation was greatest, the vessels were most distended, and the motion of the blood *slowest.* Dr. Hastings repeated this experiment and coincided in the views of Dr. Philip. Dr. Mackintosh considers that three points have been specially overlooked by writers on this subject: 1st, the influence of the nervous system; 2d, the changes in the quality of the blood itself; and 3d, the diseased state of the vessels. That the nerves have an influence in the production of inflammation, has never been denied. It has long been supposed that the buffy state of the blood is entirely depending upon the nerves.* In proof of the nervous influence as exercised in this affection, Dr. Mackintosh relates the curious fact that horses, which are very liable to inflammation of the foot, have been cured, after a lameness of months, by simply dividing the nerves immediately above the fetlock joint. The morbid change of the fluids and the blood is more particularly established by the circumstance of the red particles ceasing to be observed, and the blood's "assuming a flocculent appearance, becoming darker and darker, and the vessels be-

* See Gregory's Practice, 3d London edition, p. 105.

coming in some degree obstructed." Looks not this like the doctrine of Boerhaave, modified, it is true, but essentially the same? Simple increase of the action of the vessels does not constitute inflammation. If it did, blushing and the redness produced by friction would be inflammation. But if in the latter case the friction be sufficiently long continued, or, in other words, the blood be detained long enough in the same part, inflammation ensues. Any obstruction continued a sufficient length of time produces the same effect as is instanced in strangulated hernia.

"The essence of inflammation partly consists in more blood entering by the arteries than can escape by the veins, or than can be made use of, as when the part is in a state of health, the consequence is a congestion from partial obstruction; and it is, I imagine, this degree of obstruction which produces the throbbing. The vessels of the inflamed part are greatly dilated, and the number of them containing red blood is greatly increased. It is also probable, that diseased action in the inner membrane of both arteries and veins produces inflammation. Two well known facts may also be mentioned. Diminished action of the vessels may be produced and maintained for some considerable time, and the effect will be, not inflammation of the part itself, but of another part of the body at a distance. Again, if inflammation has been excited in any organ, an increased flow of blood takes place towards it, and all other parts must consequently suffer from a diminished supply of good arterial blood; this produces embarrassed action in the functions of all organs—hence the general constitutional disturbance. In the practice of physic, this last circumstance is too generally overlooked. Physicians are too apt to expect, that the constitutional symptoms will cease the moment the original disease is subdued; this not being the case, they often push their remedies far beyond the proper point, and make matters worse. This is, perhaps, more peculiarly a British error, and we are justly condemned for it by our continental brethren. Other physicians, again, do very great mischief by stimulating and throwing in bark and other tonics at a too early period after the convalescence has commenced; they will be found in the morning ordering a large bleeding, and in the evening a stimulant. Cases, no doubt, will occur in which this change is really necessary; all that is wished to be impressed upon the reader in this part of the work, is, that such practice is too often had recourse to, more from an unfounded *dread* of the occurrence of "typhoid symptoms," than from real necessity; and that sufficient confidence is not placed in the powers of the constitution to repair injuries which have been sustained. They are, indeed, too often found tampering with the human frame, as if it resembled a piece of machinery of their own construction."

In considering the causes of inflammation, Dr. Mackintosh takes occasion to correct an error into which Thomson has

fallen when alluding to the effects of cold. This author asserts that cold acts more directly on the parts with which it comes in contact, and he cites the inhalation of cold air as producing catarrhal inflammation of the mucous membrane of the air passages. This is justly considered by our author a most unhappy illustration, as, if it were just in its application, an individual in cold regions ought never to be free from bronchitis. The contrary, however, is the fact. The sailors who accompanied Capt. Parry in his voyages of discovery towards the north pole, enjoyed remarkably good health. To this fact we may add those furnished in the interesting communications of Drs. Charles Drake and Xavier Tessier, which appeared in a former volume of this journal, illustrating the beneficial tendency of the inspiration of very cold air into the lungs in diseases of these organs.* The far greater frequency of catarrh as a consequence upon damp extremities than upon any other cause should not be forgotten.

In describing the phenomena of internal inflammation, Dr. Mackintosh makes some striking observations on the difficulties a physician has to encounter in forming a diagnosis—difficulties which we have seen too often overlooked by those dashing practitioners, who are so anxious to evince the rapidity with which they draw conclusions from the first survey of a patient. Thus there may be dyspnœa and fever present, and yet the lungs be free from disease, while the pericardium is affected. There may be violent vomiting, with tenderness in the epigastrium, and even fever; and yet the disease, instead of being in the stomach, may have its seat in the brain. There may be severe local and general disturbance, and the cause be a neuralgic affection, or the impeded function of some viscus. There may be, in short, pain, heat, and fever, and no inflammatory action present. Yet how often has the sweeping rule been urgently impressed on the mind of the unwary student, "while there is pain —bleed!" The buffy blood, too, may exist without actual inflammation, and when inflammation exists, it is not always present. "Mental agitation and fatigue produce the buffy coat," p. 15. Dr. M. places, nevertheless, great reliance on its appearance, when taken in conjunction with other circumstances, particularly when the surface of the blood drawn is also cupped, and when the quantity of the serum is large.

---

* See Nos. 26 and 28 of this Journal, p. 199 and 522.

We think Dr. Mackintosh inclined to treat an able contemporary with undue severity and injustice in the following sentence:

"I feel convinced," says Dr. M., "that no pathological physician will join a modern writer on the practice of physic in the following dogmas: 'Delirium marks inflammation of the brain; impatience of light, ophthalmia; hoarseness, inflammation of the larynx; and dyspnœa, that of the lungs.' The practice of physic would, indeed, be simple and certain, were these things true. But this is not the place to enter into a refutation of these arbitrary statements."

What conclusion can the reader of this passage draw, but that Dr. Gregory (for it is that able writer who is here alluded to) intended to convey the idea that these symptoms were all in all sufficient to denote the presence of the respective diseases which they accompanied? Yet no conclusion can be more unfair or at variance with the truth. Under the head of the different signs of the presence of inflammation, Dr. Gregory very correctly enumerates as *one* of these a disturbance of function in the part inflamed; and then cites the above instances in point. He does not, therefore, mean to say that it alone denotes inflammation, no more than he intended to convey the idea that pain, or fever, or any other symptom taken by itself, is evidence of the presence of local inflammation. Did this assertion need any other proof than the whole spirit of Dr. Gregory's work, as well as the immediate context from which the above extract is so unfairly detached, it is satisfactorily established by the fact of the author's treating of dyspnœa, &c. in a separate section, as pure nervous affections. We sincerely regret to witness such perverse conduct towards a rival author—as it is calculated to lessen our confidence, either in the candor of the writer's statement, or in the soundness of his judgment.

Fevers.—We are happy to preceive that Dr. Mackintosh does not bow at the footstool of the arbitrary rulers, who, in vain, attempt to govern the medical world, on this most important of all medical subjects. It is a gratifying feature of the present epoch in medicine, that the great majority of the profession think for themselves, and are disposed to reject all exclusive doctrines as inapplicable to the theory and practice of medicine. Defeated partizans may impute this indifference to their favorite theories, on the part of physicians, to a bigoted attachment to ancient prejudices, to ignorance and indolence. We fully concur with the elo-

quent author of the annual address published in our last number, in ascribing it to "the more general diffusion of knowledge—to a candid, but decisive application of the experience of the past, and to an increasing desire to study diseases directly with reference to their appropriate, as well as ever varying symptoms, and the changes that are thus produced."

Dr. Mackintosh attempts very ingeniously to account for the origin of the peculiar and diverse hypotheses assumed by Clutterbuck and Broussais, to explain the nature of fever. The former, he thinks, has seated this affection in the brain exclusively, because he practises in the largest commercial city in the world, among a people whose minds are more actively employed than their bodies, who are exposed to intense anxiety occasioned by their pursuits in commerce, their extensive and hazardous speculations and frequent reverses, and who indulge in heavy meals and sedentary habits. The latter, on the other hand, has seated his hobby in the bowels, because the stewed meats, the salads, and oils, and sweets, consumed by the higher ranks in France, and the hard beer and acid wines, and unwholesome food, used by the lower classes, tend to invite irritation to that nether quarter.

The views of Dr. M. are thus summed up:

1st. Fevers frequently depend on inflammation of an acute, but more frequently of a subacute nature of every organ and tissue of the body. If the inflammation be acute, the febrile symptoms will be correspondingly high; but if subacute, they will assume a slighter form.

2d. Fevers very often depend on mere functional derangement of some organ, having as yet no connexion with inflammation.

3d. Fevers sometimes depend on the mere loss of balance in the circulation, producing congestion.

If the author had added a loss of balance in the nervous excitement to this third clause, he would have been more correct in point of fact, and, also, conveyed his own ideas, as expressed in a subsequent paragraph, more fully, in which he adopts the well known definition of Dr. Fordyce, so often quoted and borrowed, "a fever is a disease that affects the whole system," &c.

Dr. Mackintosh condemns all previous classifications of fever, and adopts the following:

1st. Intermittent fever.

2d. Remittent or yellow fever; infantile remittent.

3d. Continued.

This class is divided into—

1st. Fever from simple functional derangement.
2d. Ditto from inflammation.
3d. Ditto from congestion.
4th. A mixed form of fever between these last three, but in which congestion predominates at last, commonly denominated typhus and synochus.

4th. Hectic fever.

5th. Fevers attended with eruptions.

This class is subdivided into—

1st. Scarlet fever.
2d. Measles.
3d. Smallpox.
4th. Ditto modified.
5th. Chickenpox.
6th. Miliary fever.
7th. Roseola.
8th. Urticaria.

6th. The plague.

The description of the phenomena of fever is spirited and accurate; but we must pass it over to glance at the chapter on the causes of fever.

The following paragraph deserves record for the correctness of its views.

"No one who has attended to this subject, can deny the influence of contagion, and marsh miasm, on the human body; but I conceive that too much has been attributed to them, and too little to the state of the constitution previous to seizure, and also by far too little to the common causes of fever. A weighty argument in favor of contagion, is sometimes drawn from the well known fact of fevers spreading not only from one to another in a family, but also in the same tenement; but the circumstances under which they are placed should not be forgotten, as being likely of themselves to give rise to disease. The anxieties, the hopes and fears, which alternately affect individuals attending others whom they love, the exposure to cold and fatigue, the night watching and want of rest, the irregularity in taking nourishment, and the neglected state of the bowels, all tending to produce loss of balance in the circulation, will go far to account for a number of individuals in the same family being affected, the one after the other, with a fever. Neither should it be forgotten that all these individuals residing in the same locality, and living in the same manner, may have been exposed at the same period with the person first affected, to the miasm or epidemic influence, or some of the common causes which will produce fever. Why one individual should be sooner attacked than another, and have the disease perhaps more severely, it is difficult to determine.

Intermittent fever is never contagious, says Dr. Mackintosh, but yellow fever and typhus are so in a very high degree *under particular circumstances.* What these are, the author does not state; he thinks contagion, as a cause of fever, has been much overrated in its influence. Under the head of yellow fever, we expected to find more proofs, or facts, in support of its contagiousness, but not a word is said excepting a general repetition of the fact; guarded, however, by the assertion, that abundant other causes may produce the disease. An author who treats a subject so important to the interests of his professional brethren abroad, with such passing indifference, should not detain us with an attempt at refutation, even were it otherwise necessary.

Intermittent Fevers.—The author takes especial pains to refute the assertion of Dr. Cullen, that this class of fevers arise only from marsh miasmata. He adduces instances of ague from worms, repelled eruptions, &c. These we suspect were rather ephemeræ, and ceased with the immediate cause producing them. The intermittent fever of Cullen and most authors, is a disease following its own laws, and frequently resisting all methods of cure long after the cause has been withdrawn. This is a circumstance overlooked by the exclusive pathologists.

In describing the last stage of intermittent fever, Dr. M. observes "now and then there are marked remissions followed by exacerbations, and then it is called intermittent; when, in addition to the two last mentioned circumstances, there is a considerable irritability of stomach, bilious vomiting, and a tinge of the skin and eyes, then the case is termed a bilious remittent, or yellow fever." Surely our readers will say, if this be the case, then we have yellow fever daily at our doors—in our remote villages as well as on the seaboard; and easily enough do we overcome the monster that has so long appalled us through mistaken fear.

Appearances found on Dissection. Dr. M. has found, in the bodies of those who died in the cold stage, the vessels of the brain gorged with venous blood. He has also seen the carotids, after passing into the skull, greatly distended with black blood. The lungs are so much congested that they sink in water, and are of a dark color. Dr. M. has not observed any structural disease in these organs. The heart and the veins near it were gorged with blood, and there is an effusion of blood or bloody serum sometimes in the cavity of the pleura. In the abdomen there are dark colored patches on the peritoneum, occupying a considerable portion of the intestines. All the tissues are highly injected. The liver is gorged with blood

and discolored, but like the lungs not affected in structure, as is proved by its resuming its natural appearance on being well washed and cleared of blood. The spleen was found in the same condition, but did not resume its natural appearance on undergoing the same treatment. The stomach and intestines contained, in one instance, a dark sanguineous looking matter like the black vomit—probably a secretion from the mucous vessels. We quote the following abstract from the work of M. Bailly in the words of our author:

"In the head he found traces of disease, more or less extensive, in thirty-three cases; in twenty-two of these there was thickening, and other marks of inflammation, in the arachnoid coat; and in eleven, inflammation of the substance of the brain. In twenty cases there was gastro-enteritis. In four cases gastritis by itself, and also four of enteritis, uncomplicated with gastritis. In eleven the spleen was softened; in some instances enlarged; one weighed from two to three pounds, and another from eight to ten pounds. In two cases the spleen was large and hardened. In three cases the spleen was ruptured, and in one it was engorged with blood. In two cases the liver was softened; in four engorged with blood; and in one case inflamed. In one case the gall bladder was inflamed. In two cases there was pericarditis. In three, peritonitis. In one, pneumonitis. In one case there was inflammation and enlargement of the parotid."

Pathology of Intermittents. As a favorable specimen of our author's manner, and a happy and forcible illustration of the state of the system during the cold stage of fever, we shall quote his description of it at large.

"*Cold Stage.* For aught any one knows, the first link in the chain of morbid action may be in the nervous system; there is decided evidence of its being involved from the beginning to the termination of the disease. But as there is nothing to guide us in the investigation, I shall not enter into it, having resolved to avoid fine spun ultimate causes, which I confess I could never understand. But the first thing which we perceive, is diminished circulation of blood in the extremities, then a sense of coldness, and with it a feeling which is ascribed to weakness. These are evidences of an irregular determination of blood, by whatever cause produced; and in proportion as internal organs become congested,* their functions

* This term simply implies, that the balance between the arterial and venous system is lost for the time, the latter being overloaded or congested, and not that the circulation in any organ, or set of organs, is entirely obstructed, which nevertheless does actually happen in those extreme cases in which reaction does not take place, and the individuals die in the cold stage. I may add, it is a term not of modern invention.

are impeded. The lungs show their gorged state, by the short, difficult, and anxious breathing; the impossibility of inflating them beyond the least degree; and by the violent, dry cough which occasionally takes place. The livid appearance of the cheeks, lips, and mucous membrane of the mouth, is an additional proof of the embarrassed state of the lungs, showing that the blood is not properly decarbonized. The disordered functions of the brain in this stage, depend, I imagine, principally upon this state of the lungs, and also upon the overloaded state of the right side of the heart, preventing the free circulation from the head. The disordered functions of the brain may also certainly be produced by a change in the balance of the circulation of the vessels of the head, independent of the state of the lungs and heart. The universal feeling of prostration is the consequence of these morbid conditions. The tremors may probably be attributed to congestion of the spinal marrow. The sense of cold is owing partly to the state of the nervous system, and partly to the state of the lungs. The pain in the head and loins, and oppression at the præcordia, may be fairly attributed to the same causes. The muscular prostration, and feeling of sinking, are not owing to actual debility, but to obstructed action, in consequence of the abovementioned condition of the organs. The proof of all which circumstances is to be found in the fact, now well known, that abstracting blood, in the cold stage, will immediately remove not only the difficulty of breathing, the pain in the head and loins, the disordered functions of the brain, (when these exist,) the oppression at the præcordia, &c., but will also stop the rigors, restore the strength of the pulse, increase the heat of the whole body, and cause the sensation of cold to vanish."

In the *treatment* of intermittents, Dr. Mackintosh is of opinion that "bleeding, in the cold stage, conjoined with the subsequent use of the sulphate of quinine and laxatives," is as certain a cure as any remedy for any known disease. Dr. M., however, first details the ordinary methods with which, of course, he finds considerable fault. His condemnation of stimulants indiscriminately used is just. He informs us that Dr. Gregory used to mention in his lectures two cases of violent epistaxis reducing the patients very low, which were induced by cayenne pepper and brandy. In the application of external heat, warm fomentations to the epigastrium are preferred to the general bath. The detraction of blood in the cold stage will generally cut it short, and frequently prevent the return of the disease altogether. The quantity of blood necessary to be drawn is not stated. From one ounce and a half to twenty-four ounces may be required. The operation is sometimes attended with difficulty on account of the tremulous motions of the patient; this vanishes as the patient is relieved. Dr. M. was once successful, by bleeding in a cold stage which had lasted twenty-six hours. The re-

lief is evinced by the ease with which the patient breathes, the subsidence of the tremors, and an abatement of the sensation of cold. It probably acts by relieving the heart, large blood vessels, and the brain and lungs from the accumulation of blood which oppresses them. For the safety of the practice, Dr. M. refers to Dr. Haviland, professor of the theory and practice of physic in the University of Cambridge; Dr. Malden, of Worcester; Dr. Buller, of Cork; Dr. Allison, of Edinburgh, &c.; and also to the work of M. Bailly.

In the hot stage, bleeding may be necessary to counteract attendant inflammation; but it has not so good an effect as in the cold stage. All febrifuges and diaphoretics are condemned!

During the interval it is necessary to ascertain whether there is any local disease present. In pursuing this investigation medical men are too apt to think that it is only the liver and the spleen which may be affected, whereas the brain and lungs are equally apt to suffer. Bronchitis and affections of the heart may also be present. In the course of his remarks on the use of bark and quinine, the author comments in just terms of reproach on the quackery of those physicians *who never fail to cure a case of fever.*

Dr. Mackintosh gives the sulphate of quinine in three doses of five grains each, with half an hour of interval, immediately before the expected paroxysm; or three grains every half hour, beginning about three hours before the paroxysm.

Laxatives should never be forgotten, and patients should be watched lest they give erroneous accounts of the condition of their bowels. A neglect of their function is a serious impediment to the cure.

Remittent or Yellow Fever.—Our author thus commences this section: "The disease which falls now to be considered, is a fever which occasionally abates in violence, but in which the patient never feels quite well till another attack comes on." He goes on to inform his readers that it is a disease of remarkable remission, and when the skin is yellow, it is yellow fever! His description of the phenomena belongs to yellow fever strictly so called, and is as distinct as we can well imagine from the ordinary remittent fever, of which he takes scarcely any cognizance. He evidently considers yellow fever the highest grade of remittents. Our reasons for differing in this opinion, we have stated at large in our review of an able work on fever, published some years since by Dr. Huestis, of Alabama. We shall, in all probability, have occasion to return to this subject in a short time.

Infantile Remittent.—From the section on this interesting subject, we shall only quote the appearances on dissection.

"The most constant diseased appearances are found in the abdomen. Sometimes peritoneal inflammation seems to have been the immediate cause of death, and I have had many opportunities of ascertaining that inflammation of this tissue has been excited by the extension of ulceration of the mucous membrane, through the muscular and mucous tissues. The mesenteric glands are very generally found enlarged, sometimes enormously so, and seem to consist of a cheesy looking matter, which is usually described as depending on scrofulous action, but I believe from erroneous pathological notions, which shall be explained hereafter. On cutting open the stomach and bowels, the mucous membrane will be found in various conditions, thickened, softened, ulcerated, occasionally very vascular. The ulcerations in the ileum and colon strictly resemble those which I have afterwards to describe in the bowel complaints of children, except that the whole mucous surface of the colon is occasionally involved in one sheet of ulceration, with a rough and ragged surface and hypertrophy of all the coats, as is observed in many cases of phthisis pulmonalis. When there is no ulceration, we sometimes see mere vascularity, with or without softening of the mucous membrane; the quantity of thick mucus adhering firmly to the surface is very great; and it is curious, that after being carefully removed by washing and wiping, I have seen fresh exudations take place even during maceration, not only in water, but in spirits; and what has sometimes surprized me very much, after having laid by preparations, when I thought they were quite free, I have found them many months afterwards again thickly coated over with mucus. Large abrasions are also sometimes found in the mucous membrane of the stomach, at the splenic extremity, which have penetrated through all the tissues at one point; in other places they appeared to be converted into a gelatinous mass. From careful examination, it would seem that this kind of disorganization is the effect of previous inflammation. This appearance has excited considerable interest of late years, and has been noticed on the continent by Cruveilheir and others, and in this country, many years ago, by Underwood, who, nevertheless, was no great pathologist; but the profession stands greatly indebted to Dr. John Gairdner, of Edinburgh, who has collected a great number of interesting cases, some of which occurred in his own practice, which will be found in the first and second volumes of the Medico-Chirurgical Transactions of Edinburgh.

"It has been stated in the description of the disease, that head and chest symptoms sometimes become lighted up, but on watching the progress of the affection, these are observed not to form essential parts of it; nevertheless, the appearances sometimes found in these cavities, deserve to be mentioned.

"In the head there is generally effusion in the ventricles, and also between the arachnoid and pia mater, with great vascularity in the latter membrane.

"In the thorax, the most common appearance is in the bronchial membrane, which is vascular, and the tubes are more or less filled with mucus, which is to be described more particularly when treating of bronchitis. The substance of the lungs also shows various degrees of inflammation, and occasionally traces of pleuritis are to be seen."

Continued Fever.—We have seen that the author subdivides this class into four varieties. The first is that from functional derangement. This is not a formidable affection and is only difficult to treat because it is impossible to fix upon any one organ which can be said to be primarily affected. Will not this difficulty vanish, if we consider the disease, as it undoubtedly is, a simple fever of the whole system, and direct our remedies with a view to remove the general oppression by evacuations proportioned to the exigencies of each case, and by remedies calculated to renew the checked secretions from the principal viscera? Dr. Mackintosh prefers bleeding, in the treatment of this disease—and he has been induced to make this preference "by observing the manner in which this kind of fever, in particular, terminates; first, it terminates upon the appearance of an eruption, which eruption is generally urticaria, sometimes erysipelas, which acts beneficially by counter-irritation; secondly, he has seen it terminate by epistaxis; thirdly, by diarrhœa; fourthly, by profuse night sweats; and fifthly, by abscess." He is, therefore, induced to "take the law into his own hand," and deplete before the strength is reduced. Should there be any doubt about bleeding, leeches may be substituted. This whole argument and its deductions appear to us fallacious in the extreme. We will admit that as nature does relieve herself in one of the five ways pointed out, it is right to imitate her process whenever we wish to cut short the disease. But if we imitate her process in one of the ways, why not in all the others? Why, in every case, have recourse to the same method when we see that she varies in her efforts to attain the same end? Or why use all when she generally restricts herself to one alone? It will probably be found that those cases which are relieved by epistaxis have been marked in their course by plethora, those which are terminated by diarrhœa have had prominent symptoms of abdominal irritation or accumulations, and so on. Let us, then, select that method which the symptoms present indicate, and not have recurrence for ever to the lancet, which may needlessly waste the strength of the patient, or to leeches, which are so often prescribed *secundum artem* to the serious exhaustion of his purse. That our author does not place great reliance on other eva-

cuants than the lancet we can well comprehend, when he recommends two grains of calomel and six of rhubarb as a purgative for an adult in fever! It is true he orders it to be frequently repeated till it has produced the desired effect. That it does not cut short the disease cannot be matter of surprize to those who frequently find it necessary to administer scruple and even drachm doses of calomel to abate the violence of fever.

Fever from Inflammation. While the author rejects the absurd doctrine that fever always depends upon inflammation of one particular viscus, and maintains only that inflammation may give rise to fever, he does not, as it seems to us, dwell sufficiently upon the converse of this last proposition, that the latter may light up the former. He does, indeed, admit it explicitly in his general views of fever, but he does not enlarge upon it with the attention to which we think it entitled. That which he denominates fever from inflammation, is what has been generally recognized under the name of symptomatic fever, and being dependent npon inflammation as its primary cause, requires a vigor in the treatment proportioned to the extent of this cause. It will not yield until the cause has been removed; and, generally, though not always, will subside with its removal. Not so with the fever which is primary, and in which inflammation is a contingent occurrence only, developed in an organ predisposed to disease by weakness, whether natural or acquired. This pursues its own laws, according as it is an intermittent or remittent, or continued fever; the product of common or epidemic causes, or, finally, of contagion, as the exanthemata. To the inflammation which may be lighted up by this fever, attention must, indeed, be paid, and the general principles of treatment applicable to the phlegmasiæ be pursued. But the primary disease must not be lost sight of, and the treatment of accessary symptoms must be modified, so as not to militate with the plan necessary to subdue the general disease, or at the least conduct it to a happy issue. Thus, if an individual, debilitated by depressing causes, as fatigue, grief, &c., be exposed to the action of malaria, and contract an intermittent or remittent fever, and if, during its continuance, some one predisposed organ should take on inflammatory action, he would not bear depletion by the lancet to the extent which a robust healthy man could bear, or he himself, before he was exposed to the malarious influence, could have borne if inflammation had been the primary affection, and the fever been only a consequence. Hence it is, that in these cases local bleeding is preferred to general, and is frequently

employed even in cases in which gentle tonics, to support the decaying powers of nature, are admissible, if not indispensable. This distinction appears to us all important, and we regret to see it so much overlooked by modern pathologists.

In discussing the treatment of inflammatory fever, Dr. M. speaks of Sydenham in a strain of panegyric, which, however merited, strikes us with with great surprize, as coming from one who, on all other occasions, underrates the value of all writers who are not pathologists. It is so pointed and so well calculated to confirm the tenor of the observations with which we commenced this article, that we are tempted to extract it.

"Sydenham, whose book is one of the greatest ornaments which medical literature possesses, recommended, above a hundred and sixty years ago, the same, or nearly the same practice, which stands good in the present day. He was led by his great wisdom and experience into the proper line of treatment, although he had not the advantage which we enjoy, of examining morbid appearances after death to confirm it. He had erroneous notions in consequence of his unacquaintance with morbid anatomy, but he was the first man who pointed out the impropriety of treating all fevers alike, by showing that different organs are affected in different cases. He also pointed out very precisely, that fever requires a different treatment in every stage as it advances. He also made pointed observations against the farrago of medicines which were generally prescribed, and his own plans were exceedingly simple. It was he who first introduced the plan of purging in fevers. His chief hope seems to have depended on the lancet, laxatives, and opiates, the strict antiphlogistic diet, and allowing no solid food. And if he could have proved his opinions by an appeal to dissections, there would not have been, in all probability, so many changes in practice since his day."

Is it not singular that inflammation, on which modern pathology has shed more light than on any other disease, was properly treated more than a century before its present improved state. And yet symptomatology is not worthy of the attention of the medical student!

Typhus and synochus are considered by our author to be mixed forms of fever; the former of the functional fever united with the congestive; the latter of the inflammatory united with the same. In treating of these, he invites the attention of the student, in an an especial manner, to the pathological condition of the lungs, which are not only oppressed by congestion, but still farther embarrassed by an inflammatory affection of the bronchial tubes. This last circumstance has attracted his attention for fifteen years, and

he believes that few instances of febrile affection take place without bronchitis being present in some one of its stages, and very often it is the primary affection. He earnestly recommends the use of the stethoscope in fevers, as the heart will frequently be found to beat violently, while the pulse at the wrist can scarcely be felt, and the extremities are even cold. He has seen many patients recover after having been stimulated, on the discovery of this state of the heart, by leeches and blisters.

Emetics are highly recommended in the last stage of some of the cases of mixed fever, in which the bronchial tubes are oppressed by accumulation of muco-purulent matter taking place during sleep.

The author's practice in the Dispensary, during the last severe epidemic in Edinburgh, appears to have been successful. Out of one hundred and forty cases, one only died. This proportion increased afterwards to one in thirty-seven.

Hectic fever is supposed by Dr. Mackintosh to have no necessary connexion with the formation of pus, but to depend most frequently on inflammation of the mucous membranes. This view can scarcely be deemed satisfactory, as it fails to inform us with what peculiarity of inflammation this fever is connected, which ought to have been done, as it is by no means a general attendant on mucous inflammation.

The explanation which Dr. Mackintosh gives us of the pathology of eruptive fevers, strikes us as being equally unfortunate with that of hectic fever. He considers the eruption as a mere symptom of this class of diseases, yet he does not deny that there is something *very peculiar* in them —"peculiar, inasmuch as the eruptions present external characters, differing from each other as well as from other eruptions, and that they occur once only in a lifetime," and he might have added that the majority of them are contagious, and can be transmitted by inoculation. Notwithstanding these peculiarities, which he does not make even an attempt to explain away, he goes on to insist that they are mere inflammations, more or less acute, of the mucous membranes—measles and smallpox of those of the respiratory passages—urticaria and miliary fever of the abdomen, &c. The eruption is a mere symptom, and by no means an universal one; and is to be regarded as a natural blister or counter-irritant produced by powers inherent in the constitution, which enable it to throw off so much of the disease from an internal organ of which the functions are necessary to life. Could we admit this as an explanation,

we would still ask why, in all cases of inflammation of the mucous membranes, the same counter-irritation produced by inherent powers is not established. Why shall this take place once only in a lifetime, and that when the inflammation has been communicated by contagion? And farther, why shall the counter-irritant, established by nature, be in one instance measles, in another smallpox! And why in all other instances, except when contagion has thus communicated the disease, shall nature fail to establish the same counter-irritant? That the erruption in the exanthemata relieves not only the external organs, but the whole system, we do not feel disposed to deny; but that it is, therefore, a mere symptom, which may or may not be present, and that the essence of the disease in these affections is simple inflammation of the mucous membranes, appears to us untenable and even absurd. The mucous membranes are probably affected in these diseases simultaneously with the external covering of the body, and there is undoubtedly a balance preserved between them in the quantity of diseased action spent upon each. When this balance is destroyed, the one suffers more than the other, and the great object should be to restore it. This we think has been satisfactorily demonstrated by the researches of the best pathologists of the present day. The affection of the mucous membrane we believe, however, to be equally peculiar with that of the skin, and by no means ordinary inflammation. This last will be frequently developed, both in the membranes immediately affected, and in other parts, as the lungs, the pleura, the liver, the peritoneum. &c. Its occurrence is to be regarded, as in fever, a contingent and accessary, not an essential, symptom of the disease. And this view of the subject, we are farther inclined to believe, will lead to the most rational and efficient methods of treatment, and obviate that blind recourse on all occasions to one and the same means, which an exclusive pathology no less than the most ignorant empiricism universally employs.

Under the head of *Scarlatina*, Dr. Mackintosh divides all eruptive diseases into two grand varieties, the congestive and the inflammatory; the simple variety he omits. He probably does not recognize it in his exclusive pathology, as it is not generally fatal, and has, therefore, not been recognized by the knife. Every practical physician, not misguided by his attachment to theory, will acknowledge the truth of Armstrong's classification, copied as it is from the book of nature, not as she displays herself in the dissecting room alone, but also at the bedside.

His treatment of scarlatina is judicious. He cautions against the stimulating gargles so generally recommended for children. A little warm water answers every purpose. Active treatment at the onset of the disease will obviate secondary fever and its *putrid* train of symptoms.

The indiscriminate employment of bark and wine in the congestive form of measles, when the eruption recedes, is very properly and forcibly condemned. An interesting history of the disease, as it occurred under this shape at Edinburgh in 1816, is given, in which numbers died after this treatment, in whom the lungs and other organs were found inflamed after death. The following extract will illustrate the author's mode of proceeding in these cases:

"A few years ago, I was suddenly called to see a child in measles, the first day of the eruption; and every appearance had been so favorable up to the moment of the sudden recession of the rash, that the family had not applied for medical advice. When I saw it, the eruption, which had been extensive, and of the usual color, was not now to be seen, but still it was to be felt. The child was under three years of age, and of a good constitution; it had had three or four strong convulsions in the course of rather less than an hour; it was now insensible, and to all appearance comatose; one pupil dilated, while the other was of the natural size; and its hands were clenched. A good sized vein was found in the arm, which was instantly opened, and from eight to ten ounces of blood were abstracted, when its breathing, and every other appearance, became more favorable; the pulse, which was under sixty, rose gradually as the bleeding went on, and the child soon became quite sensible. So far from debility following, I was obliged to apply leeches next day to the head, and the child made a rapid recovery, and was running about in the course of a week."

In *Smallpox* the author recommends the pustules to be opened early, as a certain preventive of marks.

Urticaria. It has occurred to Dr. M. to observe, that individuals who are teazed with this and similar affections during youth, are afterwards most likely to be troubled with the gout. This fact admits of easy explanation. A case is related of a very beautiful young lady, who, being frequently affected with this rash, applied to an eminent physician, who gave her a large bottle of a solution of the acetate of lead, with directions to sponge her body with it whenever it was itchy. She stripped herself on the first occasion and applied the wash extensively. The itching ceased, and the eruption disappeared. She instantly felt sick and oppressed, and fainted. She survived, but has never known a day's health, and now labors under an affection of the uterus and liver.

We now come to the second part, in which the diseases of the digestive organs are considered.

Difficult Dentition is the first subject treated of in this part —and many excellent practical observations are made on it. Scarification of the gum is, in all cases, recommended, and the dread of a hardening of it effectually counteracted. We mention this fact, because this dread has been entertained by very high authority. Soft pillows and warm caps are pointed out as frequent exciting causes of the affections of the head in children. In cases of oppression about the head, if the ordinary remedies do not succeed, leeches should be applied to the feet. In the application of these animals, Dr. M. always selects a situation over a bone upon which pressure may be made to arrest the hemorrhage which is sometimes too long continued.

CHAP. II. *Difficult Deglutition*, from inflammation, ulceration, and enlargement of the tongue, cynanche tonsillaris, copharyngea, and œsophageal inflammation.

Affections of the tongue are correctly believed by Dr. Mackintosh to depend in general upon the state of the chylo-poietic viscera. Those who are subject to gastric derangement will readily remember how often their tongue has felt sore, been slightly ulcerated, and sulcated on its tip and edges.

In cases of aphthæ in children, attended by excoriations about the anus, and disturbance of the intestinal function, leeches to the abdomen, castor oil and opiate injections, say a few drops of laudanum mixed with starch or gruel, and also Dover's powder with an aromatic, are recommended. An abstemious diet is to be prescribed. In cases of debility, wine is preferable to meat. The chloride of soda in a weak solution is serviceable as an internal medicine. Borax and sugar applied to the mouth are condemned.

Cynanche tonsillaris is generally supposed to be occasioned by cold produced by the vicissitudes of the weather, but Dr. M. thinks that derangement of the stomach and bowels has great influence as a cause. We believe the two causes combined are the most frequent sources of the disease. There are several families known to us, in whom the operation of the latter cause seems always necessary to develop the disease. In these we find emetics very efficient in the very commencement of the disease. Our author does not extol them highly. The inhalation of warm vapor is recommended. We are accustomed to place great reliance on this measure, and have been often surprized to see practitioners recommend gargles, and stimulating ones, too, when there are

pain, and heat, and difficult deglutition present. In ulceration following this disease, a solution of the nitrate of silver in distilled water, in the proportion of four, six, or even ten grains to the ounce, is the most efficacious application. The ulcerated surface is first carefully to be washed, and then the solution must be applied by means of a brush. It should be carefully and delicately done, else mischief ensues.

Indigestion.—This troublesome and protean affection may arise, first, from simple functional derangement of the stomach, liver, duodenum, spleen, or pancreas; secondly, from indigestible and acrid substances taken into the stomach; thirdly, from structural derangement in the digestive organs; fourthly, from long continued constipation; and lastly, from derangements in other organs.

We find a very useful remark made by the author in his treatment of dyspepsia, in relation to stockings. Worsted stockings are generally recommended to keep the feet warm and dry, but they frequently produce an opposite effect. The reason of this is, that they increase the perspiration, which accumulating, lowers the temperature of the foot. Thin cotton or silk answers better. Leeches are, of course, recommended where there is uneasiness in the epigastrium.

We cannot but concur in the regret expressed by the author, that the name of Abernethy should be associated with the insufferable quackery which prescribes the blue pill on all occasions when the digestive organs suffer. Often have we seen it do harm.

Turpentine is recommended as the best remedy for tympanitis.

In gastrodynia, the strict prohibition of indigestible articles, a vomit, external fomentations, the warm bath, liquorice solution, lactucarium, &c., are recommended. We have found the oxide of bismuth a most efficient remedy when aided by appropriate general treatment.

We pass over, as not presenting any novelty, the chapter on hemorrhages from the stomach and bowels.

In *colic*, the first object undoubtedly should be to procure evacuation from the bowels, but we cannot concur in the propriety of having recourse indiscriminately, and on all occasions, to tobacco injections. Other means will generally answer the purpose, and it is only when they fail that tobacco should be used.

The remarks on painter's colic we think peculiarly happy, probably because they coincide with the results of our own experience in this disease. Thus it has occurred to us repeatedly to observe the fact insisted on by Dr. M., that the

pulse is rarely affected, notwithstanding the violence of the disease. It will be quickened by the pain and consequent contortions of the patient, but it is soft and compressible. Dissection after death has generally developed traces of inflammation or ulceration. These we are inclined to regard as superinduced by, and not constituting, the disease. We regard it, and we coincide on this occasion with Dr. M., as seated in the nervous system. Inflammation is always to be dreaded. Hence, bleeding and leeches become occasionally necessary. The remedies which Dr. M. considers next in importance, we look upon as the first, viz. calomel and opium. He recommends five of the first and one or two or the second, to be repeated at short intervals. Croton oil should be used with the calomel and opium, or turpentine both by the mouth and by injections.

The disease will generally last a week.

The inflammatory affections of the abdominal viscera are next considered. These we shall take up in the next number, having already devoted as much space as we could spare in the present, to this very interesting volume. We dismiss it, for the present, with the single remark, that it will amply repay the perusal and careful study of the practitioner of medicine. The author, in his aspirations after superiority, evidently underrates the value of the labors of his competitors, but he is an acute observer, a diligent student, and undoubtedly an industrious and spirited writer.

ART. II. *Elements of Chemistry, including the Recent Discoveries and Doctrines of the Science.* By EDWARD TURNER, M. D., F. R. S. E., &c. Second Edition, enlarged and carefully revised. London, 1828. 8vo. p.p. 831.

LATE in the last year, a second edition of this valuable work issued from the press of the London University. The American reprint of the first edition, although executed in a style altogether inferior, has been favorably received by our chemists, and is gradually pushing its way, as a text book, into our colleges and academies. We are, therefore, induced to offer a few remarks which have been suggested by a perusal of this improved edition.

In our opinion a point of the first importance, in teaching or studying a science like that of chemistry, is a proper arrangement of the subjects which it embraces. Consisting, as it does, of numerous isolated facts, unless they are in some

degree linked together, their study is full of labor and embarrassment. The advantages of a good arrangement are, indeed, very generally admitted, and yet it is somewhat surprizing that there should be so much diversity of opinion concerning the principles upon which it should rest.

In this respect we consider Dr. Turner's work objectionable. It is divided into four principal parts. The first part relates to what are called *imponderables*, a very vague term, and for which, as Mr. Brande observes, we might with equal propriety substitute the term *inexpressibles;* the second part relates to Inorganic Chemistry; the third to Organic Chemistry; and the fourth to Analytical Chemistry.

Under the first head the general powers are considered, as heat, light, electricity, &c., with the exception of affinity, which we see no good reason for excluding from what are here termed the imponderables; under the second part, simple and compound non-metallic substances are treated of in an order which we are far from considering judicious. We cannot conceive the advantages of noticing in the outset water and air; nor even of the plan proposed, we believe, by Gay Lussac and Thenard, and followed by our author, of placing chlorine, bromine, and iodine among the electro-positive substances. The classification of the salts, moreover, depends upon the acidifying principles; while to us there appears to be a decided advantage in treating of them under the head of each basis, whether metallic or otherwise.

We have, perhaps, been hypercritical upon this point; but it strikes us that arrangement is too little attended to by the authors of elementary works. From this remark, however, we must except the excellent Manual of Prof. Brande, which owes much of its popularity to the judicious method in which the subjects are noticed.

The general subjects which seem to form a necessary introduction to the study of the various simple and compound bodies, occupy a considerable proportion of this work, and yet some of these are by no means complete.

In the section on electricity, which the author tells us, in the preface to this edition, is almost wholly new, we were surprized to see the repetition of an error with regard to the cause of the repulsion which takes place between two bodies negatively electrified, upon the theory of a single fluid. "The separation of two positive electric bodies," says he, "is easily accounted for by the repulsive power supposed to be exerted among the particles of the electri-

city accumulated upon them; while substances which are negative, or possess less than their natural quantity of electricity, cannot be influenced by such a power; and, therefore, it is argued, ought not to diverge or separate. This mode of reasoning, however, is entirely hypothetical. There is no proof that the divergence observed in similarly electrified bodies is owing to actual repulsion; and the phenomena may be explained equally well on the principle that the two excited substances are attracted in opposite directions, in consequence of the contiguous strata of air being rendered oppositely electrical by induction. In this way all the phenomena of electrical attraction and repulsion, are referable to the attractive power exerted between bodies in opposite states of electrical excitement." P. 87.

Now, this explanation is far from being satisfactory. The conditions of the original Fraklinian theory were, 1st, that the particles of the electric fluid, so called, repel one another with a certain force; and, 2d, that they attract with the same force the particles of all other matter. But the strict examinations of Alpinus and Cavendish have shown that with these alone we are unable to explain the want of action between two neutral bodies; for, according to these, there would be in such bodies two attractions to one repulsion. In order, therefore, to render this hypothesis conformable to fact, it was found necessary to annex to it another condition, namely: that the particles of simple matter, that is of matter uncombined with the electric fluid, exert a repulsive action on one another. When two negatively electrified bodies repel one another, therefore, it can only be considered, upon the theory of one fluid, as the effect of the repulsion exerted between the particles of matter.

The sections on affinity and the laws of combination are extensive, and furnish masterly views of these important and interesting subjects. Indeed we have nowhere seen them equalled, much less excelled. We remarked, however, that the solution of salts in water, and the mixture of alcohol and water, were ranked with the combustion of phosphorus in oxygen gas and the neutralization of a pure acid by an alkali, as examples of simple combination or affinity. We have always been unwilling to admit the two former as instances of chemical affinity, which, in our opinion, should be restricted to the union of bodies in definite proportions.

The subject of combustion, which is one of considerable interest to the chemist, is not treated of in a very happy

manner, nor does the author furnish the student with a sufficient number of facts for determining its nature. His definition of the term we consider quite objectionable.

"The only phenomena of combustion noticed by an ordinary observer, are the destruction of the burning body, and the development of light and heat; but it has been demonstrated, that in addition to these circumstances, oxygen gas invariably disappears, and a new compound consisting of oxygen and the combustible is generated. The term *combustion*, therefore, in its common signification, implies the rapid union of oxygen gas and combustible matter, accompanied with light and heat." P. 184.

Now, these assertions are entirely gratuitous; and, indeed, are denied by the author himself in subsequent paragraphs. The admirable researches of Davy upon this subject, have proved that combustion is not necessarily dependent on the agency of oxygen; and that, in very many instances, oxygen gas, instead of uniting with the combustible body, is evolved by it during combustion.

In the succeeding sections, the simple non-metallic and metallic substances, as also the primary compounds of these, are described with great perspicuity, and the explanations of the various processes are in general very clearly stated. Indeed, this forms one of the most valuable features of the book.

Among the additions to the present edition, is an article on crystallization, which precedes the particular descriptions of the salts. This contains a summary exposition of crystallography, though we somewhat doubt whether the advantage of the student has been consulted in the adoption of the primary crystalline forms of Brooke, instead of those of Hauy. It contains, also, an account of the important discovery of professor Mitcherlich of Berlin, relative to the connection between the crystalline form and composition of bodies, and which has opened a field of considerable interest to the chemist.

To the sections under Organic Chemistry, no material additions appear to have been made. As they are, however, they present, perhaps, the best epitome extant of that difficult branch of chemistry.

On the whole, though not entirely free from faults, we know of no book which contains, within the same compass, a better account of the various subjects embraced by modern chemistry, than that upon which we have ventured to make these remarks. L. C. B.

ART. III. *Hints to young Medical Officers of the Army on the Examination of Recruits respecting the feigned Disabilities of the Soldiers, with Official Documents and the Regulations for the Inspection of Conscripts for the French and Prussian Armies.* By HENRY MARSHALL, Surgeon to the Forces. 8vo. London, 1828.

MR. MARSHALL, in the publication of this work, has rendered a most acceptable service to the military surgeon. Nor are his merits confined to this alone. It is impossible to study the simulation of diseases without increasing our knowledge of their symptoms and their general history.

A treatise like the present will be best reviewed by giving a succinct account of its contents, and to this we now proceed.

The volume opens with a publication of the orders that have issued for the last twelve years from the war office and its various departments, concerning the inspection of recruits. It would appear that some time since, so many improper persons were received by surgeons, that a serious pecuniary loss was incurred by the government. This led to severe animadversion, and at last, in May, 1817, to the publication of the following circular, addressed to officers commanding regiments:

"Sir—It having been found that in many cases recruits for the regular army, who have been passed by military medical officers, have, when brought for final inspection to the head quarters of the recruiting district, been rejected by the district surgeon as unfit for his majesty's service on account of disabilities, the existence of which it was the duty of the medical officer who first examined the recruit to have ascertained, I am to apprize you, that his royal highness, the prince regent, has been pleased, in the name and on behalf of his majesty, to direct that, in all such cases, *the expense which may have been incurred on account of the recruits, shall be charged against the medical officer by whom they were passed in the first instance.*"

Sir James M'Gregor, the head of the medical department of the army, in August, 1821, drew up the following rules to be observed by medical officers in their examination of recruits:

1st. No recruit to be deemed fit for service laboring under any acute or chronic disease, for which medical treatment is required at the time of examination.

2d. Laboring under old cutaneous affections of the head or body, whatever their specific character may be.

3d. Defects of eyesight, or morbid affections of the eyelids, including specks on the cornea, in whatever situation, as showing former disease; immobility or irregularity of iris, morbid adhesions thereof, opacities of the lens; fistula lachrymalis.

4th. Deafness, or purulent discharge from the ear. Stammering, or defect of speech which may render him unable to do the duty of a sentinel.

5th. Deficiency of many teeth, and particularly if accompanied with an unsound state of the remainder.

6th. Narrow, flat chest; protruded or depressed sternum; badly united fracture of the acromion or clavicle, or any other bones; general appearance of pulmonic disease, particularly if accompanied with a strumous habit; marks of repeated cupping or blistering.

7th. Visceral disease of the abdomen, particularly if accompanied with enlargement of any particular viscus; marasmus, hernia, or preternatural enlargement of the ring.

8th. Varicose state of testicles or chord; deficiency or enlargement of the testicles; fistula in perineo, or in ano; extensive hemorrhoids.

9th. Morbid enlargements of bones or joints; malformation, or loss of toes or fingers; flat feet; nodes, contraction, or stiffness of joints.

10th. Varicose veins of legs, old cicatrices adherent to the bone, or which may be likely to break out afresh on long continued exertion.

11th. Marks of punishment.

12th. Glandular swellings of the groin or neck, or general appearance of defect of health.

Whenever a recruit does not bear the mark of having had the smallpox or cowpox, it is the duty of the examining surgeon to vaccinate him at the first opportunity.*

To these, which were subsequently enlarged and explain-

---

* We were pleased to find, in a note to one of the general orders, a censure on an inspecting surgeon for permitting his colonel to interfere with him so far as to retain a recruit whom the surgeon wished to reject. The adjutant general observes that "the commander in chief could not refrain from remarking the extreme impropriety of the surgeon permitting himself to be influenced in a point of duty by the advice of a person *who could not be considered competent to give an opinion on a professional case.*" After this, our readers will readily suppose that Mr. Marshall would express his astonishment at the law in this state, which permits even the *captain of a company* to sit in judgment on the opinions of regimental surgeons.

ed, Mr. Marshall has added the "Regulations for the Inspection of Conscripts in the French and Prussian Armies." They do not materially differ from each other, and as the former has been several times republished in medical journals and other works, it is hardly necessary to state them in detail at this time.

We come next to the "Hints on the Examination of Recruits." The leading qualities (according to Mr. Marshall) required in recruits may be comprehended under four heads, viz. height; health; a certain period of life; activity, or the full power of using the several members of the body.

With respect to height and period of life, they belong to the province of military officers, although even on these points, as we shall presently see, useful advice may be received from the surgeon; but the qualities of health and activity are left to the determination of the medical branch of the service.

The infirmities or defects that disqualify recruits for military duty, are divided by Mr. Marshall into three classes:

1st. Obvious defects, (chiefly external.)
2d. Defects not obvious, (chiefly internal.)
3d. Feigned defects.

As to the first of these, they are often simulated by recruits, who receive their instructions from old soldiers. Even as to height, successful attempts at fraud have been made. Thus, some have increased their height and escaped detection by gluing pieces of buff to the soles of their feet. On the other hand, a curious case is related of a recruit, who was received by one colonel into the dragoons at Dublin, as measuring five feet three inches. On arriving at the head quarters of the regiment he was again measured, and found to be only five feet one inch in height. The case was now referred to the adjutant general, and, by order of the commander in chief, another measurement was made in the presence of a general officer, who found it to be the same as the last. The man was now ordered to be discharged, and the levy money was ordered to be paid by the colonel who enlisted him, "owing to whose neglect, a recruit so totally unfit was received into the service." The colonel, however, persisted in asserting, that he had never approved of a recruit below the regulated height, and the soldier was in consequence sent to Dublin to be remeasured. On his arrival he was placed under the standard, and found to measure five feet three inches. He attempted to reduce his height, but that species of fraud being well understood at the depot, it was instantly detected. The height in this and

similar instances is reduced by flexing the head forward a little, pushing out the abdomen, and slightly bending the knees.

The position (says Mr. Marshall) of a recruit when he is measuring should be exactly that of a soldier under arms, with his eyes looking straight before him. But the best means of obviating deception is to measure a suspected person extended on his back. The difference between the horizontal and perpendicular height of persons was ascertained by Mr. Maguire, the adjutant of the depot, at the request of Mr. Marshall, in fifty-two cases, with the following results:

In 5	the horizontal length exceeded the perpendicular height - - -	four eighths of an inch,
5	- - - -	three eighths,
13	- - - -	two eighths,
14	- - - -	one eighth,
15	- - - -	no appreciable difference,
52		

being a mean difference of three sixteenths of an inch.

In another case, a recruit endeavored to increase his height by having a piece of light wood fitted to the head, like a saddle. This was covered with a coating of cobbler's wax, and the hair, which adhered firmly to it, was so disposed as to conceal the fraud very effectually from the sight. By means of this contrivance he added nearly an inch and a quarter to his height.

It is rather surprizing, that when noticing this subject, Mr. Marshall should not have adverted to the difference in the height of the same individual when taken in the morning on rising from bed, and in the evening.

Among the other subjects of notice under the first head, are the color of the skin, the muscular capability, the condition of the external surface, the configuration of the thorax, spine, and pelvis, and the condition of the upper and lower extremities, comprehending symmetry and the marks of previous or present disease, as fractures, contractions, varicose veins, &c. The recruit should be undressed during the examination, and in particular should be made to walk repeatedly across the apartment.

The author gives specific directions under each of the heads that we have mentioned, and urges strongly the rejection of such as exhibit the appearance of debauchery. "I know no species of recruits (he observes) more unfit for the service; they are seldom out of the guard room or the hospital."

The difference in strength between the right and left arm is familiar to all, but we do not recollect that examinations have been much made concerning their comparative size. In one hundred recruits, measured under the direction of Mr. Marshall, the result was as follows:

	Right arm thicker than left.	Left thicker than right.	No difference.	Total.
Right handed individuals,	68	5	18	91
Left handed, - -	1	6	2	9
				100

The disproportion in the right handed individuals varied from one eighth of an inch to six eighths, and it was as remarkable in youths as in persons more advanced, and who, of course, had applied themselves longer to the exercise of particular trades.

Varicose veins appear to be a frequent cause of rejection. Out of about 20,000 recruits inspected at three stations, 717 were rejected from that cause.

Flatness of the soles of the feet is deemed a good cause of rejection, as such individuals are unable to endure easily the fatigue consequent on long marches; more labor being required from them to produce a certain effect, than from persons whose feet are well arched. They also vacillate laterally in walking.

Some curious facts belonging to the statistics of medicine are elicited by the tables of Mr. Marshall. Thus, during the examination of 10,800 recruits, he found five in whom the right testicle was not apparent, and six in whom the left was not. In two of these cases, there was inguinal hernia at the side, where the hernia had not descended. Out of 6,229 recruits inspected at Dublin in 1825, eighty-two had hernia, and thirty-four labored under flatness of the soles of the feet. In fifty-five the spine was deformed, and in seven the pelvis. Ulcers and cicatrices of ulcers, wounds, &c., appeared in 138.

CLASS II. *Infirmities or Defects not obvious, chiefly internal.*—Under these, Mr. Marshall enumerates the following: chronic affection of the liver, nephritic complaints, liability to rheumatism, occasional hemoptysis, incipient phthisis, vertigo, frequent headache, dyspepsia, epilepsy, periodic asthma, imbecility, short sightedness, night blindness, stone in the bladder, stricture in the urethra, incontinence of urine, &c. &c.

Many of these infirmities possess no permanent external mark of their existence, and, consequently, may be simu-

lated or escape observation during the short period a recruit is under examination.

CLASS III. *Feigned Defects.*—This is much practised by recruits, and particularly those raised in the country, who have often enlisted from some domestic broil, or some sudden excitement. They regret the step they have taken, and are willing to practise fraud in order to be relieved from it.

Mr. Marshall remarks that feigned infirmities are generally referable to three heads, viz. pretended, simulated, and excited disabilities. The last are, for the most part, external, though not always so.

To detect the varied forms which these are constantly assuming is one of the most disagreeable and arduous offices of the military surgeon, and we readily accord with Mr. Marshall in his opinion, that no small share of skill is required. Indeed, the ingenuity to which individual art and the knowledge transmitted from one soldier to another in hospitals has been carried, is such, that many of the most eminent and experienced physicians have been deceived.

Specific rules beyond those which are generally given, are of little use. Every case requires a separate investigation. It should be compared with the symptoms, history, and causes of the disease that is feigned, as given by the best authors, and verified by the examiner's own experience. Mr. Marshall advises, in doubtful cases, the exhibition of some inert substance, to which great virtues may be attributed. "But perhaps (he observes) there is no circumstance which so commonly distinguishes truth from fraud, as the report a malingerer makes of his complaints. His pains and other symptoms of disease are rarely, if ever, alleviated. He almost invariably reports that his complaints are either *worse*, or *just the same*. Now, it is almost unnecessary to remark, that there is perhaps no chronic disease, which does not admit of well marked remissions."

When convinced, after due examination, that a disease is feigned, the question next occurs how the surgeon is to act? Mr. Marshall fully concurs with Dr. Cheyne in believing, that harshness, either in manner, or even of punishment, will not tend to any useful purpose. It may intimidate the young recruit, but will, also, often incite the hardened to perseverance; and should it unfortunately happen that a mistake in diagnosis has been made, the reflections of the medical examiner must be mingled with severe regret. It is better to treat them with neglect—to continue the use of such low diet as it generally required in ordinary cases of disease—to intimate, in a pleasant way, the doubts of the physician;

and thus "to tire him by hospital discipline." Comparatively moderate uneasiness has often led to the detection of an impostor, when the infliction of very severe pain, avowedly imposed, would have been borne without his seeming to feel it.

"A deserter from the 60th regiment was tried by a court martial, and sentenced to be transferred to the African corps. While in the Provost prison, Dublin, he asserted that he had lost the use of his inferior extremities. Both medical and moral means were tried in his case, but all in vain. He was sometimes suspended by the arms, in the hope of inducing him to support himself on his feet, without avail. After about fifteen months had elapsed, he was transferred to the general hospital, where he eventually exhausted the endurance of the medical officer, and at last was confined in a solitary prison ward. One evening, a pupil attached to the hospital, who slept in a room immediately over the ward in which he was confined, thought he heard the sound of his feet in the act of walking. The sound was afterwards frequently heard, but although the pupil repeatedly endeavored to discover him on foot, he never succeeded. At last he thought of a plan for detecting the impostor, which he put in practice after obtaining the sanction of the medical officers of the establishment. The plan consisted in rubbing the soles of the feet well over with *cowhage*, which was effected with impunity to the pupil, by means of the intervention of a doe skin glove; the impostor, of course, not being informed of the nature of the substance applied to his feet. When the spiculæ of the cowhage began to irritate the skin, he was heard to get out of bed, and during great part of the night he was walking and groaning, on account of the teazing sensation occasioned by the application; he even attempted to make his escape by climbing up the chimney, but in this measure failed. Next morning he gave in, and said he was now able and willing to go wherever he might be ordered; and in a few days embarked for England, on his way to Africa."

In some cases the final part of the management of a malingerer becomes a trial of patience between him and his medical officer. The latter, however, should never, if possible, yield, nor allow his patience to be exhausted. Dr. Cheyne has very justly remarked, that "every instance in which fictitious or fabricated disease escapes detection and punishment, becomes not only a reward granted to fraud, but a premium held out to future imposition."

From the catalogue of feigned diseases that are noticed by Mr. Marshall, we select the following, with his comments.

Fevers. Our author saw a case at Fort Pitt, where the tongue was brown and dry; the hue of demarcation, however, between the exsiccated part and the clear healthy margin of the tongue, was too well marked to escape obser-

vation. Brown soap has been used to coat the tongue, and the apparent bilious tinge of a coated tongue, may be caused by chewing a little gingerbread.

Chronic Disease of the Liver. This is a complaint often feigned, and as many of the soldiers have been for years in the East or West Indies, they are frequently well acquainted with the symptoms, and detail them accurately. In all doubtful cases, mild remedies should be employed. Mercury should never be used, as it protracts the stay of the individual in the hospital, and enables him, if deceiving, to pretend many subsequent affections. In one instance that occurred to Mr. Marshall, a recruit having become tired of a military life, feigned this disease, in order to obtain a discharge. He, however, *located* the pain in the *left* side, stating, at the same time, that he had "liver." It was treated as a very grave disease. Low diet, and a solution of tart. ant., alternately with the *mistura diabolica** were regularly exhibited. Under this discipline he held out for a month, and then recovered rapidly.

Pain Simulating Rheumatism, Lumbago, and Sciatica. This class of infirmities is frequently simulated, and the detection is difficult. The imposition is more frequently discovered by the inconsistencies and contradictions that a patient makes in the history of his complaint, than by diagnostic symptoms.

Pain, whether it be in the internal or external parts, is commonly periodical; and is generally aggravated towards evening. In real rheumatism, also, there is usually some puffiness of the affected part, and a certain degree of fever and disorder of the digestive organs, with considerable alleviations of pain. On the contrary, in simulated rheumatism, there is no puffiness nor fever; the appetite is good—the pain is never alleviated, *let the weather be what it may.* Still these diseases often deceive the most skilful and attentive, particularly if, as is often the case, the individuals submit readily to such remedies as blisters, issues, &c.

"In cases of simulated lumbago, where persons remained bent nearly double, baron Percy was remarkably successful in his attempts to produce conviction by engaging them in an interesting conversation, while an assistant approached insidiously and pricked them on the posteriors with a long needle."

---

* This mixture consists of salts, infusion of tobacco, assafœtida, &c.; it is commonly given in very small quantities at a time, but so frequently repeated as to keep the taste constantly in the mouth.

Paralysis. Often feigned, and frequently long continued before it can be detected. The following case is an example:

"A private in the 10th regiment, while on duty in the Mediterranean, pretended that he had lost the power of his lower extremities, and for a period of two years endured all that medical skill and suspicion of his testimony could suggest, with a view of enabling or forcing him to return to his duty. Before recommending him to be invalided, his medical attendant submitted him to the following trial: he was confined in a small room, and a shelf well stored with provisions suspended over his head, which he could easily reach by merely standing upon his legs, but not otherwise. At the end of forty-eight hours, the food remaining untouched, it was not considered advisable to prolong the experiment. He was then included in the list of invalids, and put on board a transport bound for England. While in the harbor, an alarm was given, about midnight, that the ship was on fire: every one hurried into a boat alongside. After reaching the quay, the passengers were mustered, and it was found that the paralytic invalid had not only succeeded in saving himself, but also his trunk and clothes. He was remanded to the ranks."

Epilepsy. Soldiers have sometimes feigned this when brought out for punishment. We add some of the symptoms by which the feigned disease is frequently characterized. In a feigned paroxysm, the contortions of the different parts of the body do not always come on simultaneously. When the hands are forced open they are quickly shut again; whereas in the real disease, they often remain expanded and as inflexible as a piece of wood. An impostor can readily simulate a number of voluntary symptoms, such as violent muscular movements, rolling of the eyes, sighing, &c. If narrowly watched he will, however, be found to open his eyes occasionally, for the purpose of observing what effect his tricks have upon the bystanders, and a rapid recovery commonly occurs, when it is proposed to apply the actual cautery, or any other violent remedy, thereby showing that the sense of hearing is not impaired.

Feigned epilepsy commonly intervenes at more regular periods than the real disease. Vaidy, a medical officer in the French army, convinced himself by moral evidence that a case of epilepsy was feigned. He told a young soldier, who had been admitted into the hospital on account of this disease, that the real affection always came on in the morning. The man swallowed the bait, and from that time the paroxysm invariably supervened before noon. He was soon ordered to join his regiment.

According to Mr. Marshall, an insensibility to the approach

or application of irritating substances is the most decided proof that can be obtained, as during a paroxysm of real epilepsy sensation is totally suspended. Hence, if any evidence of feeling can be excited by stimulants, it may generally be inferred that the disease is feigned.

Deafness. It is difficult to simulate this affection consistently. When a conversation has been commenced with a man who pretends that he labors under this disability, he will not improbably continue to answer questions after the voice has been gradually lowered to moderate tone.

"A recruit from Cork, who joined the depot of the East India Company at Chatham, alleged that he had almost totally lost the sense of hearing, and the evidence of his comrades went to support this testimony. Dr. Davies admitted him into hospital and put him upon spoon diet. For nine days, Dr. Davies passed his bed without seeming to notice him during his visits to the sick. On the tenth day, he felt his pulse and made signs to him to put out his tongue; then asked the hospital sergeant what diet he gave the man. 'Spoon diet,' replied the sergeant. Dr. Davies affected to be very angry, and said 'Are you not ashamed of yourself; the poor fellow is almost starved to death; let him instantly have a beef steak and a pint of porter.' Murphy could contain himself no longer—he completely forgot his assumed defect, and, with a face full of gratitude, addressed Dr. Davies, saying, 'God Almighty bless your honor—you are the best gentleman I have seen for many a day.'"

We have exceeded our limits in the notice of this work, and must stop here, but we cannot conclude without recommending it to the perusal of all military medical officers.

T. R. B.

ART. IV. *An Account of the Morbid Appearances exhibited on Dissection in disorders of the Trachea, Lungs, and Heart; with Pathological Observations, to which a Comparison of the Symptoms with the Morbid Changes has given rise.* By THOMAS MILLS, M. D., Honorary Fellow of the King and Queen's College of Physicians. Dublin, 1829.

ALTHOUGH we are not affected by the mania which resolves the whole science of medicine into a knowledge of pathological anatomy, we are always ready to avail ourselves of every opportunity of becoming acquainted, either by actual inspection or by the evidence of others, with the appearances which dissection develops after fatal diseases. We do

not, indeed, concur with Dr. Mills in the opinion, that *morbid anatomy is the principal source of practical knowledge*, but we do regard it as an important and indispensable accessary, without which our views of disease would be imperfect, and, too frequently, erroneous. It traces the connexion between the more prominent signs and morbid changes, and, so far as we are authorized to regard these as cause and effect, points out valuable indications for future practice. The danger is, that this connexion may be supposititious only, or that the eye, eager to discover certain appearances, will assume their existence gratuitously or blindly, and even attempt to explain their absence upon hypothetical grounds. We are not inclined to entertain this fear with respect to the author of the valuable treatise before us, as his established reputation for accurate observation and sound reasoning places him above the temptation of seeking popularity by sailing at random with the fashionable current of the day. His work on fever is favorably known in this country, and we are happy in being able to communicate the contents of the present volume to our readers at so early a day after its appearance.

In the introduction, Dr. Mills expresses the hope that his object in presenting this treatise to the public will not be misunderstood. While he is compelled, by facts, to maintain the inflammatory character of the diseases described in his pages, he does not intend to assert that every disorder of the heart, trachea, or lungs is inflammatory, neither is he an advocate for indiscriminate bloodletting. He repeats, on the contrary, what he advanced in his able essay on fever, that this view and treatment is, in some (he might have added many) cases, useless or injurious. It is necessary, in short, to *individualize*, that is, to consider the particulars of every case, the age, sex, constitution, the habits and previous state of health or disease, the climate and the character of the prevailing epidemic, and the various influences, physical and moral, which affect the condition of the patient. With this view every candid reader must be satisfied, and it will induce him to place the greater reliance on the statements, and entertain the greater respect for the judgment and candor of the author.

Cynanche Trachealis.—Dr. Mills has repeatedly met with cases of this affection, unaccompanied by that croupy noise in respiration, which generally distinguishes it. A great error may, therefore, be committed by those who wait for its appearance before they proceed to make active efforts to subdue the disease. We lately had a case of this kind un-

der our care, in which every symptom of croup was present except the diagnostic sound. Had we waited for its occurrence, we feel confident that our little patient would have fallen a victim to the severity of the disease under which it labored. Recourse to the usual effective remedies restored it to health.

In the *first* case related, tonsillitis accompanied the tracheal inflammation, and occurred during the eruptive stage of measles. The eruption was copious, and the fever high; suffocation was twice threatened, and as often relieved by bloodletting, cathartics, and emetics, and by the application of blisters and leeches near the seat of the disease. Calomel and antimonial powder were prescribed and fomentations used without benefit. The patient was five years old. The bleeding was carried to the extent of six ounces on the first attack and eight on the second. Fifteen leeches were applied to the throat. Recovery took place on the eighth day.

In the *second* case, that of a young lady, twenty-six years of age, brochotomy was performed, but the event was fatal. On dissection, the lining membrane of the trachea and bronchiæ was found inflamed, and covered with coagulable lymph and purulent matter.

In the *third* case, death took place twelve hours after the attack. On dissection, the inferior portion of the trachea was found covered with a thin cream colored purulent matter, its superior portion completely obstructed by coagulable lymph, beginning to have the appearance of an adventitious membrane, and the entire mucous coat had a vascular appearance. The bronchia, lungs, and heart, sound. The only medicine which had been employed was castor oil.

The *fourth* was a case of chronic croup, which returned in paroxysms for the course of two or three months. Leeches were applied in the first instance. Emetics and the tepid bath, blisters, and cathartics were afterwards given. Leeches and blisters were repeated in ensuing paroxysms, and pills of calomel and watery extract of opium. The disease continuing, antimonial ointment was used, applied to the internal fauces, and followed by considerable eruption and copious discharge—*cured.*

The *fifth* case was characterized by the violent spasms of the larynx and trachea, threatening instant suffocation. That they were caused by inflammation is inferred from the good effects of evacuants and counter-irritants. This inference appears to us fallacious. Dr. Mills admits that in one post mortem examination at which he was present, the marks

of inflammation were not unusually striking, yet the spasms were urgent, and apparently caused the death of the child.

The *sixth* case presented symptoms of laryngitis as well as tracheal inflammation. They were all relieved by active bleeding, &c.

In general, Dr. Mills recommends in all these cases bloodletting, general and topical, blistering, emetics, cathartics, and the hot bath to be used in quick succession. Blood should be taken from the jugular vein or arm; leeches are to be applied to the external fauces; an emetico-cathartic is to be exhibited, and the patient is to be immersed for fifteen, thirty, or forty minutes in a hot bath, and the leech bites encouraged to bleed. Should these means fail to produce relief, a blister is to be applied over the external fauces, or, what is more efficient, boiling water. Calomel and opium combined with James's powder should then be given; they prove eminently useful by equalizing the circulation, and exciting the action of the cutaneous vessels. The more active means are to be repeated if necessary.

Dr. Mills has been led to think, from dissection, that the croupy noise occurs most frequently when the upper portion of the larynx is inflamed.

Cynanche Maligna.—The inflammation of the tonsil degenerated in this case into this affection, and was not relieved by the usual remedies. The inflammation having extended to the bronchiæ and lungs, active depletion was had recourse to, immediately after the employment of which, the ulcerated surface looked better. The patient was young, however, and bore treatment which an old and debilitated constitution could not have supported. Even in these last cases, where wine, bark, and cordials are indispensable, attention must be directed to the bowels, and to the secretions generally, and leeches and blisters may be sometimes used.

The ulcerated sore throat is now a comparatively rare disorder. Dr. Mills asks very pertinently, if this is not to be ascribed to the more enlightened views and improved methods of treatment, whereby inflammation is checked at the onset? Undoubtedly it is.

Diseases of the Lungs.—We shall quote the author's preliminary observations, as they are full of condensed information, unsusceptible of analysis.

"On a review of the following cases and dissections, I find that ossification of the cartilages of the ribs, and chronic inflammation of the heart, and of the lining membrane of the bronchiæ and lungs, are frequently detected in the bodies of those who labored under asthma; and that a collection of a watery fluid in the peri-

cardium is often found to accompany an obstruction of the lungs, even where the heart and pericardium are not diseased.

"These and other cases and dissections, likewise inform me that hydrocephalus often supervenes to an impeded circulation in the lungs or heart: this is a valuable fact, inasmuch as it may serve to direct the attention of the practitioner to the first symptoms of morbid action in the brain.

"In more than two or three cases where the right lung was extensively diseased, it has been discovered that pulmonary symptoms were mistaken for hepatic; and, in one instance, a disorder of the colon was mistaken for a disease of the liver. The detection of these errors is highly important; it will induce us to pause a little before we decide on the seat or nature of the complaint, or prescribe a medicine which may possibly prove injurious.

"Many of the cases of diseased lungs here detailed, were accompanied by symptoms of angina pectoris; in one only the coronary arteries were ossified; in two, the foramen ovale was found open.

"Here I beg leave to remark, that cases of phthisis pulmonalis often arise, which call for a generous diet and a moderate quantity of wine; in proof of which, I give two cases that came under my care during the last year: in the latter stages of this disease, when the body is weak and emaciated, a sedative regimen and sedative remedies are detrimental, and when we look at the unhealthy and schirrous condition of some ulcers in the lungs, it is clear that such a plan, by lowering the tone of the constitution, must shorten the life of the patient.

"Connected with one of the cases is a dissertation on a disease usually styled tubercular, but which I have denominated lymphatic phthisis, on the ground of its being a disorder of the lymphatic vessels and glands of the lungs."

The *first* case recorded is that of a very corpulent gentleman, accustomed to indulge in the use of fermented liquors, and the pleasures of the table. Cough and dyspnœa, pain and weight in the left side, pulse 104, yellowish tongue, thirst, restlessness. V. S. ℥viii. and cathartic. The blood was suffused—dejections dark colored. Shiverings, pain in the left side. Blister and squill mixture. Palpitation and purulent expectoration were next added to symptoms. V. S. ℥xii. and cathartic. Relief was obtained; but three days after, pain in left side returned, with oppression and palpitation—flushed face—fever. V. S. ℥xii. cathartic and blister. Some relief; but the sense of weight and oppression continue, and in a few days complaint returns, accompanied by spasms of the lungs and legs, numbness and weakness of lower extremities. Blisters. The numbness then extends to the abdomen, and an inability is experienced in passing the feces and urine. Orthopnœa, hectic fever, increase of numbness, involuntary dejection, hiccup, and death.

"*Dissection.* Colon—considerably distended with air; it is about five inches in diameter, and its coats are thicker than natural.

"Stomach—about five times its usual size; it descends below the umbilicus.

"Spleen—so soft as to break down into a pulp on being handled; its internal substance is of a claret color.

"Bladder—coats thickened; a stricture an inch in length is discovered in the urethra.

"Between the skin of the abdomen and the peritoneum the fat is three inches in thickness.

"Omentum—loaded with fat.

"Lungs—fleshy and in some parts firm; the bronchiæ are lined with a thickish yellow fluid: towards the posterior inferior portion of the right lung are found some calculous concretions. The root of the lobe of the left lung is adherent to the pericardium and mediastium; this portion of the lung has the appearance of a whitish tumor, larger than an orange, which, on being cut into, is of a semi-cartilaginous texture, and contains numerous cells and tubercles filled with purulent matter: on examination it would appear that the diseased action was extending into the contiguous substance of the lungs, which is more firm and fleshy than any other part.

"Pericardium—adherent to the diaphragm, and contains about four ounces of serous fluid.

"Heart—of a natural size and appearance; the root of the semi-lunar valves of the aorta is thickened.

"About half a pint of serous fluid is found in each cavity of the chest."

In the *second* case, hydrocephalus cut short the life of the patient. He had been subject to asthma, and the cartilages of the ribs were found ossified, a circumstance often noticed by Dr. Mills.

The *fourth* case is interesting, as it was preceded by all the symptoms peculiar to hepatic disease, as pain in the right hypochondre, shooting to the shoulder and umbilicus, low fever, diminished appetite, irregular bowels and variegated stools, and the pink sediment in the urine; yet, on death, no disease was discovered in the liver. The right and left lung were tuberculated, and there were two vomicæ in it—extensive adhesion. Intestines and stomach inflamed—three ulcers in colon half an inch in length and one fourth in width. Dr. M. thinks the inflammation of the mucous membrane of the trachea œsophagus and stomach was occasioned by irritation of acrid expectoration.

In the *sixth* case, pain in the right hypochondre gave rise to the opinion that the liver was principally affected. Dissection exhibited it sound—a slight adhesion only subsisting between its convex portion, and the parietes of the abdo-

men indicated a low degree of inflammation, which had occurred in the early period of the disease. Cough, dyspnœa, hectic fever, palpitation, and double sighing, were the prominent and urgent symptoms. The lungs were found tuberculated and ulcerous, and a large quantity of watery fluid in the pericardium. The stethoscope would, in this instance, have assisted in forming a correct diagnosis. Dr. Mills scarcely alludes to this instrument.

The *eighth* case was an instance of inflammation of the lungs and brain, causing premature labor and death. The appearances on dissection were confirmatory of these symptoms in life. The arachnoid membrane and pia mater were thickened and opaque, and between these membranes a purulent matter and coagulable lymph were observable. A large portion of watery fluid was found in the ventricles and at the base of the brain. The same appearances were discovered in the chest and abdomen.

Case *ninth* was one of ulcerous phthisis, with hepatization of the lungs and enlarged liver.

Symptoms. Mrs. P., aged 29, subject to habitual dyspnœa and palpitation; has had cough for months, accompanied by muco-purulent expectoration and fever, frequent vomiting in the morning, inappetency, and indigestion. Has indulged in fermented liquors, and had three children. Pulse 116, weak and irregular—has hæmoptysis, fæces dark, urine lateritious, tongue yellow on the sides, and red in the centre; weight and oppression in the sternum and epigastrium, dyspnœa, palpitation, liver enlarged. These symptoms increased in violence, delirium and lurid countenance, death.

Dissection. Abdomen—integuments and omentum loaded with fat. Stomach—preternaturally large, muscular coat thicker than usual. Liver—right lobe larger than natural, descending below the cartilages of the ribs, left lobe occupies the entire epigastre, and extends into the left hypochondre; both lobes of a light brick color, mottled and soft. Gall bladder—contracted, and contains yellow bile. Spleen—of a deep purple color, and soft. Thorax—lungs adherent to the parietes, do not collapse; congested with venous blood, so as to have a fleshy appearance. In the centre of the middle lobule of the right lung, are two ulcers communicating with the bronchiæ, about two inches in diameter, and lined with a brownish purulent fluid. In the left lung a similar color. Pericardium contains one ounce and a half of serous fluid. Heart—natural, but foramen ovale not closed; the aperture would admit a goose quill.

The *thirteenth* case shows that inflammation of the joints

is sometimes accompanied by great and extensive inflammation of the vital organs. Profuse diaphoresis and catharsis produced no relief; bloodletting alone abated the symptoms. The blood exhibited a singular appearance, buffed and cupped at the top to about an inch in depth, then a coat of blood about one fourth of an inch in thickness, below which the buffy coat again presented itself, half an inch in thickness.

Lymphatic Phthisis.—In a very interesting case related of this affection, extensive disorganization had taken place in nearly all the viscera of the body. The glandular system universally affected. Dr. Mills maintains that the lungs abound with lymphatic vessels and glands, but these are only apparent when enlarged by disease, and then they are designated as scrofulous tubercles. They follow the same laws, and present the same symptoms, as similar glands in the neck: when inflamed, there are heat, fugitive pain, swelling, fever—when suppurating, a cheesy, curdy, or lympho-purulent matter is present. Why, then, argues the author, shall not the same method of treatment be applicable to both cases, making due allowance for difference of structure? while inflammation subsists in either, active depletion is indicated, and the only reason why the indication is not followed, or even recognized, in these, is that the disease, being termed scrofula, is supposed to be one of debility—a capital error. What are called scrofulous tubercles, then, our author considers to be lymphatic vessels, or a congeries of these vessels called glands, in a state of inflammation and suppuration.

The predisposition to lymphatic phthisis may generally be suspected by well known characteristics of complexion, diseased condition of the cervical, axillary, and mesenteric glands, the effects of dentition and juvenile dentition, &c. Great care must be taken to prevent the exciting causes from lighting up the predisposition into actual disease. This is to be effected by diminishing the irritability of the system, giving tone to the constitution, and preserving in a healthy condition the different organs and functions of life. The following is a masterly description of the disease:

"I have stated that lymphatic phthisis is obscure in its origin, and of slow growth; there are symptoms, however, by which its approach may be detected, and, in some cases, in time sufficient to arrest its progress—these are, an appearance of delicacy in the expression of countenance and in the frame of the body, a slight cough, or rather hem, generally unattended by expectoration, and

seldom noticed by the patient or his friends, and if noticed by strangers not acknowledged; the pulse is above the natural standard, and easily excited; the respiration is hurried by slight causes, and there is frequent palpitation; a face commonly pale or sallow is easily flushed; a sense of weight or fulness is frequently felt in the head, accompanied by vertigo or tinnitus aurium; the usual exercises are followed by lassitude and languor; and there is a slow but gradual emaciation.

"As the disease advances, slight fugitive pains and a sense of oppression and weight are occasionally complained of in the chest, and aggravated by a deep inspiration; the digestive organs are disturbed, and the excretions assume a preternatural appearance; a low, irregular fever comes on, indicated by thirst, heat of skin, slight chills, frequency of pulse, and whitish tongue: such is a general outline of the complaint in its first stage, when there is some hope of checking its progress. In its second or confirmed stage, the symptoms are so prominent and so dangerous, they can neither be mistaken nor removed; it is worthy of remark, that the sputa, in tubercular phthisis, are seldom tinged with blood; these tubercles are found in distinct cysts, and, being the product of diseased lymphatic vessels and glands, we cannot expect them to contain blood, but we discover a cheesy or curdy matter, varying in color and consistence according to the intensity and duration of the disorder, resembling the curdy, whitish, and wheyey matter detected in the lacteal glands of the mesentery when inflamed and suppurated.

"It is curious and deserving of notice, that these tubercles should not only be compared to milk in the shape of cheese, curds, cream, or whey, but that the taste of the sputa should be the same, saltish or sweetish, and when in a state of putrefaction, both products should be equally offensive. Is not the schirrous appearance so frequently noticed in the ulcers of the lungs, an additional argument in proof of the glandular nature of tubercular or lymphatic phthisis?"

As prophylactics against the development of this disease, setons or issues, established in different parts of the thorax, are most servicable. Warm clothing, a pure dry air, a serene sky, and an equable climate, are desirable, but Dr. Mills asks, where are they to be found? We think some of the islands in the West Indies afford the best situations for consumptive patients in the world. Perflated by refreshing sea breezes, enjoying a uniform temperature, proverbially dry, and enriched with the most delicious fruits to be found on the face of the earth, they possess every advantage of locality that an invalid can desire, and offer every prospect of relief, if the advances of disease have not already been too great. Such an island we know CURACOA to be, and have every reason to believe that several other islands are not inferior in their suitableness to consumptive patients.

In the former, we have seen patients who had labored under the most unpromising symptoms very unexpectedly recover, their constitutions renewed as it were by the eternal sunshine and bracing trade winds—and their despondency vanishing before the delightful influences of hospitality and ease. Dr. Mills recommends a voyage to the United States in the American packet ships as a useful measure in the earlier stages of the disease.

Cases of Recovery. In the first case there was gross purulent expectoration, dyspnœa, emaciation, and debility, hectic fever, loss of appetite and rest, and a long endurance of the disease to alarm and lead to an unfavorable prognosis. Tubercles were, at different periods, thrown up, and the cavities must have consequently healed up, as the cough diminished and other symptoms abated. Small blisters to different parts of the chest always afforded relief; opiates produced ease, abating the cough and procuring rest, and, at no one time did they check the expectoration. These were, however, only palliative remedies. Purgatives more especially, a nutritious diet, claret wine in moderate quantities, and a well regulated temperature, effected the cure. For upwards of three months the patient took purgatives several times daily, and the quantity of fecal matter discharged was very great. When the bowels were confined the patient was uneasy—hence, Dr. Mills argues, that there was torpor in the secreting vessels of the intestines. No one will dispute this, surely. When this was removed, "every function of life seemed again to be restored, and he felt light and cheerful." Dr. Mills concludes with the observation, that if he was asked why he gave purgatives so freely, his reply would be, because they afforded decided relief. Were it not for the tubercles thrown up, we should consider this as a pure case of the mimosis acuta of Dr. Marshall Hall. Had the stethoscope been used in this case, it would have been much more instructive than it now is.

In the next case the pulse was preternaturally slow, the countenance pale, the eye fixed, and the speech inarticulate, the extremities were cold, and every symptom of approaching dissolution. Wine and a cordial draught improved the whole appearance of the patient. As the stethoscope was not employed, we cannot concur in the author's somewhat arbitrary designation of this case under phthisis pulmonalis. The same remark will apply to the three remaining cases of recovery. We cannot help regretting that the author should have thought it necessary at the end of each case to record the name of the druggist from whom the medicines employ-

ed were procured. It savors a little too much of coalition between the doctor and the shop, and must certainly deface the book in the eye of every reader not resident in Dublin.

Diseases of the Heart.—Eighteen fatal cases, and eight of recovery, are minutely recorded, in all of which the heart was the actual or supposed seat of disease. We say *supposed*, because, as the stethoscope was not made use of in any one instance, it might be doubtful whether in the cases of recovery this organ was really affected. We shall briefly enumerate the several cases.

Case 1st. Considerable enlargement of the heart, general adhesions of the pericardium. Symptoms—asthma, palpitation, frequent, hard, and intermitting pulse, and angina pectoris.

Case 2d. Rheumatism of the heart, great enlargement, with dropsy of the pericardium.

Case 3d. Disease of the heart mistaken for that of the lungs.

"Morbid anatomy serves to detect errors in practice, and to correct false theories; it serves also to make the physician modest and cautious in delivering his opinion as to the seat, nature, and probable termination of disease.

"In this case I ascribed the affection of the chest to the presence of deep seated tubercles in the lungs, and the palpitation and oppression of the heart to the irritability and engorgement of this organ, occasioned by the difficult transmission of the blood through the lungs. On dissection, I discovered that this opinion was ill founded, and that the symptoms were chiefly referable to subacute inflammation of the pericardium and its adhesions to the heart and adjoining membranes; hence, the dry cough, the dull pain in the left side, spreading to the left shoulder and scapula, the palpitation, præcordial oppression, dyspnœa, and irregularity of the pulse. To the extension of the inflammation of the pericardium may be ascribed the general adhesions detected in the left side of the chest and the serous effusion in the cavities, and this effusion and the incipient hepatisation of the left lung contributed in a material degree to increase the dyspnœa and destroy the life of the patient. Notwithstanding the opinion formed of the seat and nature of the complaint was incorrect, the anti-inflammatory treatment adopted was judicious; unhappily, two months had elapsed before medical advice was called for; disorganization had now taken place, and no remedy could avail."

Case 4th. Diseases of the heart with dysphagia.

Case 5th. Enlargement of the heart with adhesion to the pericardium, giving rise to effusion into several cavities. Symptoms—palpitation and dyspnœa, cough, but no expecto-

ration, pulse quick and irregular, heart apparently enlarged, orthopnœa, general anasarca.

Case 6th. Organic disease of the heart and pericardium, disordered liver, and dropsical effusion. From the comment on this case we extract the following instructive remarks:

"The first illness of this patient—cough, rheumatism, palpitation, and præcordial oppression—was produced by fear, long fasting, and exposure to cold and wet; the second was fever, called, according to the theory of the day, typhus; the third, chronic inflammation of the heart; the fourth, acute inflammation of the heart; the fifth, general dropsy; comprised within a period of about nine years. The heart was the organ primarily and principally engaged throughout these illnesses; disturbed first in its functions by fear, hunger, and cold, it was readily acted on by the common exciting causes; inflammation and disorganization succeeded, and, finally, dropsy and death. The great enlargement of this organ, the close and general adhesion of the pericardium to its substance, and the diseased condition of its valves, prove that the changes it underwent were chiefly the result of chronic inflammation, and that the complaint must have been of long duration. To the irregular actions and disorganization of the heart may be ascribed the pain, throbbing, and palpitation; the hard, frequent and irregular pulse; the dyspnœa, and the distress and difficulty attending every bodily exertion; and to the impediment to the free transmission of blood through the heart and lungs, we may refer the effusion of a watery fluid into the thorax, the orthopnœa, the purplish hue of the face and extremities, &c. And while these appearances account for the symptoms referable to the chest, the enlarged, indurated, and inflamed state of the liver, serves to account for the fugitive pains and uneasiness felt in both the hypochondria and the serous effusion into the abdomen."

Case 7th. *Angina Pectoris.*—The subject of this case, fifty-five years of age, suffered much with the usual symptoms of this affection, oppression in breathing, pain the upper part of the sternum extending to muscles of the neck, sense of strangulation, pale face and lips, and suspension of the vital powers. Hyoscyamus and the tartrate of iron were prescribed; also, antispasmodics and a blister. No great relief. The black drop produced some. The following were the post mortem appearances:

"The cartilages of the ribs were so completely ossified, that it was necessary to make use of a saw; the watery effusion in the cavity of the chest amounted to eight or nine pounds; the heart was large and flabby, and deficient in that floridness which the healthy heart possesses. The coronary arteries were ossified through their whole extent, and impervious to the smallest probe. The internal

surface of the aorta, for three or four inches from its origin, was beset by numerous osseous squamæ; the artery was rather dilated."

Dr. Mills maintains that ossification of the coronary arteries is not the only cause of angina pectoris. Disorganization of the muscular substance of the heart or of its valves, adhesions of the pericardium, and dropsy of this membrane, will also produce it. The complaint appears to depend on a temporary paralysis of the heart, and as life may be suddenly extinguished, cordials, opiates, the recumbent position, pure air, and wine, are clearly indicated.

Case 8th. Enlargement of the heart, diseased lungs and liver.

Case 9th. Do. with hydrops pericardii.

Case 10th. Disease of the heart and its valves, general dropsy. This occurred in a child of only seven and a half years old.

Case 11th. Heart, lungs, and liver diseased, and symptoms of angina pectoris.

Case 12th. Great enlargement of the heart, and dropsy.

Case 13th. Disease of the heart, anasarca, and dropsical effusion into the three great cavities; operation of paracentesis performed with temporary relief. On dissection of this case, the cœcum was found in the epigastric region—an unusual circumstance. Observations by the author:

"The palpitation of the heart, the intermitting, irregular pulse, the cough, hemoptysis, and purulent expectoration and the frequent sense of strangulation, indicated disease of the thoracic viscera. On examination, the heart was found considerably enlarged, its valves were disordered, and the pericardium bore evident marks of inflammation; there was a universal adhesion between the pleura pulmonalis and costalis of the right side, and a large quantity of serous fluid was found in the left cavity of the chest, and in the pericardium.

"The lungs were sound, although hemoptysis and purulent expectoration accompanied the cough; but the lining membrane of the bronchiæ was thickened, inflamed, and covered with matter similar to that expectorated.

"There was headache, stupor, coma, and delirium; a watery fluid was detected between the membranes and in the ventricles of the brain.

"Several symptoms of indigestion were present, accompanied by ascites and anasarca, and by a sense of uneasiness in the epigastrium; the liver was found tuberculated and schirrous."

Case 14th. Chronic pericarditis, &c.

Case 15th. Diseased heart and lungs.

Case 16th. Chronic inflammation of the heart and pericardium.

Case 17th. Enlargement of the heart, dropsical effusion, &c.

Case 18th. Acute inflammation of the heart and pericardium, &c.

Cases of Recovery.—The first is an instance of angina pectoris in which benefit was derived from an abstemious diet, perfect rest of mind and body, mild aperients, leeches, and a long continued drain in the region of the heart. Hence it is inferred that the disease depended in part, at least, on chronic inflammation.

Case 2d, was an acute inflammation of the heart and lining membrane of the stomach. Treatment consisted in general and local bloodletting, aperients, turpentine injections, and was successful.

Case 3d. Chronic inflammation of the heart mistaken for a gouty affection.

The remaining cases are inflammatory affections of this organ relieved by bleeding and anti-inflammatory measures. They are all instructive, but too minute to bear transfusion into our pages. We have given a full view of the contents of this instructive volume, and with the exception of the neglect of the stethoscope in cases so aptly requiring its employment, we have every reason to commend it to the profession, as a useful and well written manual.

ART. V. *Illustrations of the Diseases of the Breast.* By Sir ASTLEY COOPER, Bart., F. R. S., Serjeant Surgeon to his Majesty, Consulting Surgeon of Guy's Hospital, Lecturer on Anatomy and Surgery, &c. &c. &c. In two parts. Part 1st. London, 1829. 4to., pp. 89.

SELDOM does the eye of the medical critic repose on so splendid a specimen of typographical beauty as is here spread before him by the rich letter press of this ample quarto, embellished by nine beautifully colored engravings. Devoted to a most important subject, it derives all the additional interest which the elevated character, extensive experience, and original views of the author can bestow upon it, and will recommend itself to the attention of every student of surgery. In its present costly dress it is not likely, however, to meet the eyes of many members of the profession in this country.

A succinct account of its pages must, therefore, prove a grateful offering at the present time.

The diseases of the breast are divided into two classes—those which are, and those which are not, malignant. The first class only is treated of in the part now published. These do not arise from a vitiated state of the system, nor produce any dangerous constitutional effects; neither do they contaminate the parts in their neighborhood, nor affect those at a distance from their original seat.

Alterations will, however, be sometimes produced in these swellings, when they have existed a long time, by changes of the constitution, which may render their extirpation necessary. Malignancy may be lighted up by disease of the constitution, by mental anxiety, and also by the cessation of the menstrual discharge.

Sir Astley dwells with significant emphasis on the advantages of distinguishing incurable from curable diseases; the dangerous from those which are slight; those which require surgical operations, whether of a severe or a trifling nature, from those which do not. The uninformed surgeon is too apt to fall into the vulgar error of confounding every affection of the breast with cancer. It is not long since we heard of a surgeon who had decided upon the extirpation of a tumor in the breast of a lady, who, alarmed at the idea of the knife, requested another surgeon's opinion. Leeches and the antiphlogistic treatment were adopted, and in a few weeks the tumor disappeared! There is a great variety in the diseases of the breast, and it is the special object of sir Astley Cooper to call the attention of his brethren to the duty imposed upon them of becoming acquainted with the different appearances these varieties assume.

Some of the tumors which affect the breast are the result of acute inflammation; others are of a simply chronic kind; some are chronic, but attended by a specific action; others, lastly, are specific and malignant. Now a diagnosis between these can only be accomplished by careful and nice manipular examinations; by repeated inspection of parts which have been removed by operation; by examination of those met with in the body after death, and by a minute history of each individual case.

"I have scarcely witnessed a stronger expression of delight," says sir Astley, "than that which has illuminated the features of a female—perhaps the mother of a large family dependent upon her for protection, education, and support—who, upon consulting a surgeon for some tumor in her bosom,

and expecting to hear from him a confirmation of the sentence she had pronounced upon herself, receives, on the contrary, an assurance that her apprehensions are unfounded. Pale and trembling, she enters the surgeon's apartment, and baring her bosom, faintly articulates, Sir, I am come to consult you for a cancer in breast; and when, after a careful examination, the surgeon states, he has the pleasure of assuring her that the disease is not cancerous—that it has not the character of malignancy—that it is not dangerous, and will not require an operation, the sudden transition from apprehension to joy brightens her countenance with the smile of gratitude; and the happiness of the moment can scarcely be exceeded, when she returns with delighted affection to the family from which she had previously considered herself destined soon to be separated by death, with the alternative only of being saved by a dubious and painful operation." P. 4.

What, then, must have been the feelings of the lady to whose case we have alluded above, and with what contradictory sensations must she have regarded the ignorant operator who would have doomed her to useless misery, and the skilful surgeon who stayed the dreadful doom!

The diseases of the breast may be divided into three classes:

First, into those which are the result of common inflammation, whether acute or chronic.

Secondly, those which arise from peculiar specific action, but which are not malignant, and do not contaminate other structures.

Thirdly, those which are not only dependent upon local, specific, and malignant action, but are connected with an unhealthy state of the constitution.

By malignancy the author understands a local diseased action, not only affecting the parts in which it has its original seat, but contaminating those in its neighborhood. It is produced by a morbid state of the constitution, and is frequently accompanied by similar disease in other parts of the body. This definition, proceeding from such high authority, will, perhaps, satisfy those who are fond of a number of words jumbled together so as to fill up a sentence easily remembered. It certainly enjoys the merit, not very rare in medical technology, of being sufficiently periphrastic.

Under the first class are comprehended the acute inflammation of the breast, as the milk abscess; the chronic inflammation, which remains for some time in a state of indolent swelling, and often terminates in an indolent abscess; and the

lacteal tumor, in which the chronic inflammation is followed by obstruction in one of the lactiferous tubes, producing a large lacteal tumor.

In the second class are included,

1st. The hydatid tumor.
2d. The chronic.
3d. The ossific.
4th. The adipose.
5th. The large and pendulous breast.
6th. The scrofulous.
7th. The irritable breast.
8th. The ecchymosis of the breast.

The third class consists of the scirrhous and fungous tubercles which are malignant.

Acute Inflammation.—It is unnecessary to dwell on the symptoms of this affection, as they do not differ from those presented in other parts of the body. It is adhesive in the first, suppurative in the second, and ulcerative in the third stage. A firm, sensitive tumor of the whole or part of the mammary gland is produced in the first stage, and the dense fascia which envelops this gland causes the most intense suffering. To this enlargement succeeds a blush of redness on the surface of the breast—then follow the pulsatory throbbing pain, the prominence and smoothness of a part of the tumor, and fluctuation. The constitution sympathizes—the cuticle separates—ulceration follows in the cutis, and the matter is discharged through the opening.

From ten days to three weeks are required for the completion of these processes. The most common causes are irregular determinations of blood to the organ, a neglect of putting the child early to the breasts, and stimulant drinks.

In the adhesive stage, sir Astley uses a lotion of one ounce of spirit of wine and five ounces of water, of liquor plumbe dilutus, and purgatives. Should the patient suffer from cold application, tepid poultices and leeches may be substituted.

Should the suppurative process not be prevented, fomentations of poppy decoction, and poultices made with the same, mixed with bread, should be applied three or four times a day. They encourage secretion by their warmth, soothe and relax the part, and diminish the irritation.

To allay the general sufferings of the patient, opium, combined with the spiritus mindereri or the saline draught, will be necessary.

Shall the Abscess be opened?—"If the abscess be quick in its progress, if it be placed on the anterior surface of the breast, and if the sufferings it occasions are not excessively severe,

it is best to leave them to their natural course, rather than employ the lancet for the discharge of the matter. But if, on the contrary, the abscess in its commencement be very deeply placed, if its progress be tedious, and if the local sufferings be excessively severe, if there be a high degree of irritative fever, and the patient suffer from profuse perspiration and want of rest," then the opening should be artificially made. The opening should be made where the matter is most superficial, and the fluctuation distinct. Its size should be proportioned to its depth.

Sometimes several of these abscesses form in the same breast. Opium and quinine will be required in this case. When sinuses form owing to the depth of the abscess, it is necessary to inject them with a solution of two or three drops of the strong sulphuric acid in an ounce of rose water, and apply the same solution by folds of linen over the bosom. The secretion of matter is thus checked, and adhesion induced.

In deep abscesses between the posterior surface of the breast and the ribs, leaving sinuses leading to the ribs and followed by an exfoliation of part of the rib, the same acid injection is the best treatment. The knife is unnecessary. A malignant character will sometimes be assumed by the milk abscess. A case is related of a lady in whom anxiety produced this effect and proved speedily fatal.

The emplastrum ammoniaci, cum hydrargyro, or frictions with the iodine ointment, will remove the hardness that is sometimes a sequela to this affection.

As a general rule, the child should be permitted to suck as long as the mother's sufferings will allow it.

Sore Nipples.—This is known to be a very troublesome affection, annoying to both patient and practitioner, and often baffling the best directed efforts for their removal. It appears, according to our author, in three forms: first, in simple excoriation; secondly, in deep cracks at the junction of the nipple with the areola; and thirdly, in deeper ulceration of the nipple by which a part of it is removed. The pain in these cases is so great, frequently, as to forbid the child's suckling, from which cause abscess may be formed. The best application to the first form is a solution of borax in water, viz. a drachm of the former, three ounces and a half of the latter, with the addition of half an ounce of alcohol.

To prevent nipples from becoming sore, a lotion of strong brine, to be used some time before the lying-in, is recommended. It hardens the cuticle, and renders it, of course, less liable to ulceration. Ointments are not highly spoken of in

these affections. If any be used, it should be the ointment of bismuth or zinc, or the simple cerate.

We are the more minute in our analysis, as we think it applicable to the every day wants of the practitioner.

Chronic Abscess.—The length of time it requires to form the little pain attending it, the absence of redness and of heat in the part, the want of rigors and other constitutional symptoms are characteristic of this tumor. It is frequently suspected to be a malignant swelling, requiring an operation for its removal. This mistake has frequently continued, until the knife, with which the extirpation was to be made, having accidentally entered the abscess, the escape of matter first informed the surgeon of his error. The sense of fluctuation appreciable on careful examination, and tenderness on continued pressure, have generally directed sir Astley to a correct diagnosis.

In the treatment of this affection, general remedies must be given, as it is owing to some defect in the constitution, or a deficiency in the secretions: the pilula hydrargyri submuriatis composita at night, and the bark with soda twice or three times a day; or the compound infusion of gentian with soda and rhubarb. Locally, the emplastrum ammoniaci cum hydrargyro, or a solution of muriate of ammonia with alcohol, are proper. When suppuration is induced, the abscess should be opened, and the part poulticed. Generous diet and tonic medicines are also necessary. The glands in the axillæ will enlarge from sympathy, but subside with the cause.

The Lacteal or Lactiferous Swellings, are so called because they arise from a large collection of milk in one of the lactiferous tubes. They are caused by a chronic inflammation of one of the lactiferous tubes, near the nipple, by which its aperture is closed, and the tube obliterated to the extent of an inch or more. If this tumor is discharged, it soon fills again: when the distension is excessive, it sometimes ulcerates, and discharges the milk by a small aperture at a little distance from the nipple, which continues open through the whole period of suckling, the milk being lost.

The *treatment* of this tumor is simple. If the child is weaned, the secretion of milk will soon cease, and the milk already accumulated can easily be evacuated by a slight puncture. If the child still continue at the breast, the opening may be made larger, and the milk suffered thus to escape. This affection resembles the ranula.

Hydatid Disease of the Breast.—There are four species of this swelling in the breast, three of which are not, and one is, malignant.

The first species exists in the form of simple bags, containing a serous fluid. Sir Astley would term them cellulous hydatids. The following are their symptoms:

There is a gradual tumefaction of the breast, entirely free, at first, from tenderness or pain. It slowly grows for months, and even years. The largest seen by our author weighed nine pounds. It is not in general very large. It is at first solid, but afterwards a fluctuation is perceptible, first in one part, then in several portions of the breast. The cutaneous veins become varicose; but, as a general rule, these is no pain felt. The tumor is moveable upon the pectoral muscle, and is very pendulous. The whole mammary gland is sometimes involved. At length one of the fluctuating portions slowly inflames, ulcerates, and discharges a quantity of serum, and the sac being fully emptied, and the external opening closed, the fluid does not reaccumulate in a very long period, or, perhaps not at all. At other times a mucilaginous fluid is mixed with the serum, and the cells passing successively through the ulcerative process, form sinuses very difficult to heal. The general health suffers little. The absorbent glands are not affected.

Dissection discovers the glandular structure in its interstices, and the tendinous and cellular tissues connecting it, filled with a fibrous matter, the result of chronic inflammation. In some of the interstices a bag is formed, into which is secreted a serous or glary, or sometimes a mucous fluid, which, from its viscidity, cannot escape into the surrounding tissues; but by its quantity, pressure, and the gradual yielding of the bag, becomes very large. Vast numbers of these cysts occupy each part of the breast, and occasion an effusion of fibrous matter, by which the large tumor is formed. Within these bags of fluid are the hydatids, hanging by small stalks, or assuming the character of anasarcous swellings. Some of these hydatids are produced in clusters, but the greater part are distinct from each other. The size of these cells varies from the head of a pin, to that of a musket ball. We have already seen how it may be distinguished at first from other affections. In the second stage, the existence of several distinct seats of fluctuation, and the continued absence of pain, still designate it. If there is any doubt, puncture of the bag, causing an evacuation of clear serum instead of pus, will point out the disease. It has no darting or acute pains like the scirrhous tubercle, and the general health is unaffected. In one case, the last named disease was combined with it.

Treatment. Local applications are useless, and general

treatment superfluous. When the enlargement is excessive, and a number of bags are present, the weight heavy, and the pendulous breast drags upon the neighboring parts, and the patient very apprehensive, it may be removed. The operation is a simple piece of dissection, in which every divided vessel should be secured, to prevent any great loss of blood. No cyst should be allowed to remain.

We have not room for the detailed cases. The following extract will describe the method of operating:

"The first steps of the operation consisted in making a puncture into the tumor at its most prominent part, and discharging a quantity of serum from it; by which it was at once clear, that the disease was of the hydatid kind, and the magnitude of the swelling was lessened.

"An incision was then made across the tumor, a little above its middle, and the flap of the integuments being raised, the upper part of the swelling was detached from the pectoral muscle, and with the handle of the knife, the swelling was farther separated, and a flap of skin being left below to meet that at the upper part, the operation was then concluded. Its removal was borne with great fortitude. Two arteries of great size required to be secured. The integuments were brought together by a single suture, and by adhesive plaster." P. 34.

The *second* species of hydatid disease of the breast is very curious, and cannot well be understood without an accompanying plate. In its external character it resembles the first species. Dissection alone will disclose its true character. The breast is enlarged, hardened by effusion of fibrine in lobes into the cellular tissue. It contains bags of serum and fluctuating cysts. In each of the cells there hangs a cluster of swellings like polypii, supported by a small stalk. The number of hydatids is very great. The size varies, but the largest is not greater than a barley corn. Their form is oval, and, when opened, they are found to be laminated like the crystalline lens of the eye. Extirpation is the only mode of relief.

The *third* species is the animal or globular, which consists of a bag containing a fluid which has no vascular connection with the surrounding parts, and produces within its interior a multitude of bags similar to itself. They are often met with in the liver, and in the lower part of the abdomen, between the rectum and bladder, where they will occasion retention of urine. They are also found in the omentum, ovaria, lungs, brain, and cellular membrane. They sometimes produce suppuration and ulceration, and are thus discharged.

The hydatid is contained in a cyst formed in the breast by adhesion; whenever it is deposited it excites irritation, and is soon surrounded by an effusion of fibrine highly vascular; its internal membrane is immediately applied to the hydatid. They exist *singly* in the breast. They are semi-transparent, have no mouth, are elastic, composed of two coats, of which the internal membrane appears to be uterine; for from its surface the hydatids grow. Sir Astley is induced to believe that they are distinct animals, because they have an existence of their own, without vascular connections; because they reproduce upon their interior surface their own species, and because in the brain of sheep a similar bag is formed, which enjoys motion after the sheep is killed. The globular hydatid is probably the link between vegetable and animal nature. The hydatid is deposited by the blood in the place where it grows, and wherever it reaches it causes the adhesive inflammation, by which its encasing cyst is formed. As in the former cases, when the hydatid becomes much enlarged, ulceration is the consequence.

The treatment of these tumors consists in making an incision into the cyst, and discharging its contents, after which a simple poultice will heal the wound; or it may be punctured, and the fluid evacuated; and, if it reaccumulates, a seton may be passed through it, and the sac will slough.

The diagnostic characters of this species are its central fluctuation, its solid circumference, and the absence of tenderness on pressure. It is not a dangerous affection.

Chronic Mammary Tumor.—This disease attacks young persons from seventeen to thirty years of age—occasionally those of a more advanced period. The constitution is not affected by it. The most general cause is the sympathetic influence of the uterus.

Its symptoms are—its growth from the surface towards the interior of the breast, its moveable condition, being attached by a portion of tendinous aponeurosis to the glandular structure of the breast, and not buried within the gland. It will sometimes, not always, cause some pain; neither is it tender to the touch. The growth is very slow, and the size is not large; from one to four ounces. Mr. Bond, of Brighton, removed one which weighed one pound and a half, and was only two years growing. Another case in Guy's Hospital weighed several pounds.

This tumor is not malignant, and will disappear spontaneously.

Upon a manipular examination of this swelling, it is found to be lobulated—composed of a number of lobes connected

together, leaving depressions between them, and it always preserves this conglomerate character.

Dissection ascertains it to be contained in a bag formed of a similar fibro-tendinous structure to that which envelops the glandular part of the breast; and in proportion to the magnitude of the tumor does this envelop become more distinct. It grows from, is attached to, and moveable upon the gland. It is very minutely lobulated.

The treatment is general and local. The general consists in improving the constitution by alteratives and tonics. The local, in applying the emplastrum ammoniaci cum hydrargyro, if the diseased part be indolent; or the iodine ointment. If there be heat or pain in the swelling, evaporating lotions or poultices are proper. These tumors do not absolutely require operations.

It is important to designate such tumors, as those who labor under them are fearful of marrying. A first pregnancy and the suckling which succeeds it are most sure to remove them.

The operation, as we gather from the cases detailed, consists in an assistant's holding the tumor between his fingers, then the surgeon's dividing the skin over it, drawing it forth with the double tenaculum, and easily removing it with a portion of the breast.

Cartilaginous and Ossific Tumor.—A gelatine is sometimes effused in long continued inflammation of the breast, resembling that which supplies the place of bone in the fœtus. It becomes vascular, and resembles cartilage in its "yellow whiteness," its compactness, elasticity, and becoming the nidus of bone, as phosphate of lime is deposited. The following case illustrates the character and symptoms of this affection:

Mary Farmer, aged 32 years, applied to sir Astley for a swelling in her breast, which she had observed for fourteen years.

The pain in it was very severe; the skin which covered it felt very warm when compared with the surrounding parts; and it required the constant application of evaporating lotions to moderate its warmth. The tumor was excessively hard, very painful before menstruation, but greatly relieved after it.

Various applications were tried, viz. fomentations, poultices, and stimulating plasters, but they neither disposed it to absorption nor to suppuration, and as all the means employed to disperse it were quite unavailing, she was anxious for its removal.

The glands in the axilla being free from disease, as the complaint had existed for so long a period and her general health seemed to be perfectly good, I recommended the operation, as affording the only hope of cure.

Upon examination of the swelling after its removal, the larger portion of it had the appearance of that cartilage which supplies the place of bone in the young subject; the remaining part was ossific.

The Adipose Tumor.—Sir Astley has twice performed the operation for removing this swelling. In the first case it began at the posterior part of the breast, and grew between the gland and the surface of the pectoral muscle. In the second, all those lobes of fat which are interspersed between the different portions of the mammary gland, and which serve naturally to augment the size of the bosom, and increase its prominence, became enlarged, and formed a swelling which, prior to the incision being made, seemed to involve the whole glandular structure of the breast; but when the operation was performed, the different lobes of fat forming the swelling could be drawn away from the gland itself.

The large and pendulous Breast.—This affection is the result, not of relaxation, but of an absolute growth of the secreting lobes, which can be distinctly felt to be enlarged and hardened, and it is sometimes attended with considerable tenderness.

Some irregularity of the menstrual discharge usually accompanies this disease.

The local treatment consists in the application of a suspensory bandage from the back of the neck, under each breast, to produce artificial support. The constitutional treatment is to be directed toward restoring the menstrual function. For this purpose, the ferrum ammoniatum, the mistura ferri composita, and the carbonate of iron, combined with aloes, will answer best. Mercurials may be necessary to correct the deranged biliary secretion.

A hardening of the breast sometimes occurs in females who remain unmarried until thirty or thirty-five, and whose menses are generally defective. The means already recommended, together with the hip bath, leeches when there is pain, and the emplastrum ammoniacum cum hydrargyro, will effect its removal.

Scrofulous Swelling of the Breast.—In young women, scrofulous tumors will sometimes form in the bosom, confined generally to a single tumor in one breast. In one case two existed in one breast, and one in the other.

No pain attends these swellings; they are distinctly cir-

cumscribed, very smooth on their surfaces, and scarcely tender on pressure. They are very indolent, and vary with the state of the general system, diminishing as it improves, and enlarging with its deterioration.

The absence of tenderness, and the existence of other affections of a similar character in the absorbent glands of other parts of the body, will form the best distinguishing marks of the scrofulous tumor.

They are not attended with danger, nor do they degenerate into malignancy.

It would not be justifiable to use the knife for their removal. When, through our ignorance of their true character, they have been extirpated, they are found to be of a loose and curdy fibrine, very unequally organized, possessing vascularity in some places, and therein streaked with blood. In other parts they are of a yellowish white, approaching in appearance to suppuration, but remaining solid.

Treatment. A warm and dry atmosphere, an equally regulated temperature, tepid sea bathing, gentle and regular exercise, animal food which is the most easily digested, milk, a farinaceous diet, or that which is the least stimulating and most nutritious, will be the necessary means to restore the impaired constitution of the patient. Carbonate of iron and rhubarb, the hydrarg. cum creta with rhubarb, a grain of blue pill, and two or three grains of sulphate of quinine, the infusion of calumba with rhubarb and soda, will prove the most effective medicines; improving the digestion and the secretions generally, and strengthening the powers of the system.

Local treatment avails little. A stimulating lotion or plaster may excite absorption, after the health has been generally improved.

Irritable Tumor of the Breast.—This is a highly interesting affection, which has attracted the especial attention of the distinguished author, and was, as we believe, by him originally described.

An irritable state of the breast may arise without any perceptible swelling, or it may form an irritable tumor, composed of a structure wholly dissimilar to that of the gland, and which is therefore probably specific. It is apt to occur chiefly in young females from the age of sixteen to thirty years; it never occurs previous to puberty, but sometimes later than the above interval.

There is but little swelling perceptible, when the glandular structure of the breast is affected, but one or two of its lobes becomes exquisitely tender to the touch, and if it be

handled, the pain continues for hours. The uneasy sensation extends to the axilla and shoulder, to the inner side of the elbow, and to the fingers; it also affects that side of the body as far as the hip. The patient cannot sleep on that side, and sometimes, from excess of pain, on neither side. Even the weight of the breast is sometimes intolerable. Sensations of heat and cold succeed each other in the part affected, and the pain resembles that of the tic douloureux. It sometimes induces nausea and vomiting. Before menstruation the suffering is augmented, during its continuance it is relieved, and it diminishes after the termination of that process. The skin is undiscolored.

In some cases a part only of one breast is affected, in others the whole, and sometimes both breasts suffer.

The duration of the disease is various, from a few months to several years.

Sometimes an irritable tumor is formed, distinctly circumscribed, highly sensitive to the touch, acutely painful at intervals, especially just before time of the menses, very moveable, often not larger than a pea, seldom exceeding the size of a marble. One tumor only is present in most instances. Occasionally there will be several. They never suppurate, but spontaneously cease to be painful and disappear.

"Upon dissection, they are found to be composed of a solid and semitransparent substance with fibres interwoven in it, but without any regular distribution; and I have not been able to trace any large filament of a nerve into them. They seem to be productions of the cellular membrane of the part, rather than of the glandular structure; and they are, therefore, met with in the cellular membrane of other parts of the body, accompanied with similar painful sensations."

The diagnosis of the irritable tumor is easy. The great pain, and tenderness to the touch, the anguish inflicted by manipulation, distinguish it from all other affections.

The irritable tumor is met with in persons of an irritable and warm temperament, who are very easily excited, and whose strength is diminished. The menstrual secretion is deficient, or morbidly abundant. Fluor albus is a very common attendant. The immediate or exciting cause is generally believed to be a blow, or pressure from some part of the dress.

The treatment consists in lessening the irritability of the system, abating the pain, and restoring the menstrual secretion. The best local remedy is a plaster of equal parts of soap cerate and extract of belladonna, or a poultice with solution of belladonna and bread.

Oil silk worn upon the breast, or hare skin, or some other fur, by the perspiration which it excites, aids in soothing the local irritation. When the pain is severe, leeches may be applied—but they generally produce debility, and, of course, increase irritation.

Calomel with opium and conium should be given for a time with laxatives. To lessen the irritability, the following recipe is recommended by sir Astley:

℞ Extracti conii,
Extracti papaveris aa gr. ij,
Extracti stramonii,
e seminibus gr. ss,
M. ft. pilula.

This pill may be given twice or three times during the day. Sometimes the stramonium is too powerful, when half the quantity will suffice.

The preparations of iron, before recommended, combined with aloes, and the hip bath of sea water, or an artificial salt water bath from 100 to 105°, will restore the uterine secretion.

Ecchymosis of the Breast.—To the affection last described, there is another closely allied, namely, a morbid appearance of a bruise on the breast, occurring at each menstruation, and accompanied with exquisite sensibility, pain, and tenderness.

Symptoms. It occurs in girls under twenty-two years of age, and is preceded by severe pain in the breast and arm. The extravasation of blood begins a few days before menstruation, and it appears principally in a large spot, as if a severe blow had been inflicted. Smaller and less vivid spots are observable on other parts of the breast. The part is very tender to the touch, and the pain passes down the arm to the ends of the fingers. A week after menstruation it disappears, excepting in very severe cases, when it continues till the next period. It is an evident effect of the sympathy between the uterus and the mammæ.

This affection is entirely unattended with danger. The treatment is obvious, and need not be detailed.

The sulphate of iron has been successfully used by sir Astley.

Our task is finished, and in proportion to the small share of credit to which we may lay claim as the humble analyst of the statements of others, do we hope our labor may prove useful to those for whose benefit it is intended.

MEDICAL EXTRACTS.

NO. II.

Vapor Bath among the Indians.—Mr. W. E. Cormack, in the report of his journey in search of the Red Indians in Newfoundland, made in 1828, observes, in speaking of one of the villages, "We discovered here, also, the remains of a vapor bath. The method used by the Bæothicks (Red Indians) to raise the steam, was by pouring water on large stones made very hot for the purpose, in the open air, by burning a quantity of wood around them; after this process, the ashes were removed, and a hemispherical frame work, closely covered with skins, to exclude the external air, was fixed over the stones. The patient then crept in under the skins, taking with him a birch rind bucket of water and a small bark dish to dip it out, which, by pouring on the stones, enabled him to raise the steam at pleasure.

"Since my return, I learn from the captive Red Indian woman, *Shawnawdithil*, that the vapor bath is chiefly used by old people and for rheumatic affections."—*Jameson's New Edinburgh Philosophical Journal, No.* 12.

Island of Corfu.—This is an anchorage where a good deal of fever occurs in the hot months; and I have witnessed its prevalence for several years. In this season the winds are light, or calms prevail; and at night the dews are generally very heavy. When the winds blow, it may easily be observed, from the nature of the surrounding localities, that they will imbibe febrific exhalations. To the northwest, and in the line of the greatest extent of the island, there is a good deal of wood, many ponds of stagnant water, and some marshes, the exhalations from which, in hot weather, must give a malarious influence to the winds passing over their surfaces. The above is also the direction whence the land breeze in the night reaches the anchorage; and I have then perceived the same fetid smell accompanying the first of the evening breeze, which I have experienced at Port Royal, Jamaica, at Messina, and off the Italian *fiumares.*

As to the *modus operandi* of these land breezes, impregnated with marsh vapor, it is difficult to say whether they act by suddenly re-

pressing the perspiration, from their being charged with humidity, and of a relatively low temperature, or by depressing or impairing the nervous energies in the same manner as the sirocco does; or whether they may even operate in both ways on the animal system. It is, moreover, well known that fever is more often developed in the night time, or in the evening, when the energies of the body are most exhausted from labor, fatigue, and the excitement of a hot day; while I have particularly remarked that its invasion in this climate is always declared by symptoms of exhaustion and depression. These are syncope, sudden failure of muscular strength, and disturbance of the reparative functions, with the expulsion upwards or downwards from the primæ viæ, of what the organs cannot digest or assimilate. The adynamic state of the moving power is observed in the pallor of the surface and the depressed state of the pulse. During the summers in which I have seen fevers prevalent at this anchorage, southerly and southeast winds occurred by day, and at night it was either calm with heavy dews, or else it was a land breeze possessed of the qualities above mentioned. The other localities of Corfu, if not unfavorable, possess no entire exception from the unhealthy impregnations which they impart to winds arriving at the anchorage. From the eastward there cannot be any cool sea breeze by day in the summer months; as the expanse of sea is only seven miles between the island and the bare, parched land of Albania, while the greatest surface of sea is down the channel, which lies in a southeast and southerly direction, whence the breezes are warm, moist, and relaxing.—*Black on the Climate of the Mediterranean, in Jameson's New Edinb. Phil. Journal, Vol. 5.*

Algiers.—Though the plague rages sometimes at this place, yet its natural situation keeps it free from any endemial causes of sickness; and it may be reckoned a healthy place, owing to the high land to the southward tempering the heat and dryness of the winds of the desert. All winds here from east, through north to west, are damp or foggy in the summer season.

In August, 1824, an interesting coincidence between the appearance of nineteen cases of febrile commotion and a sudden change of wind, took place off Bona, in the Euryalus frigate. The previous winds for some days had been moist and from the northward, when they were interrupted for two hours by a strong sirocco, accompanied by a great rise of temperature; and so dry was the wind, that any thing moist or damp dried in it as quickly as if it had been exposed to fire. The marked attacks of fever were almost simultaneous with the sirocco, and they disappeared in a short time from the use of gentle depletion, and with the quickly succeeding change of the weather.—*Ibid.*

Arabian mode of curing Fractured Limbs.—The Orientals will never consent to have a limb cut off. Their practice is to lay the limb upon an oiled mat, after reducing the bones, and then enclose it in a case of gypsum, or plaster of Paris, an operation which they perform much in the same way as is practised by statuaries to take

the cast of a limb. They first pour the plaster of Paris under the limb, until it rises to such a height as to touch the whole lower surface, filling up all inequalities so as to form a sort of bed, placing, at the same time, a few hollow reeds, at proper distances, and in such positions as to serve to conduct away through the plaster any fluid that might collect in the gypsum case from the wounds. When this becomes firm, which it does in a very short time, the limb is next covered with the same plaster of Paris, so as to enclose it completely, and, on hardening, to form a light case, or plaster boot, to keep the parts in as natural a position as possible. They next make a sort of furrow, or channel, in the soft plaster, on the upper surface, to receive such vulnerary fluids, during the treatment, as they think conducive to the cure, and which filter through the gypsum to moisten the leg at pleasure. To render this upper shell more easily removed or changed during the cure, if necessary to examine the state of the parts, &c., they make deep incisions into the soft plaster both lengthwise and across, though not quite through, by means of which the upper case is removed without disarranging the limb. The firmness of the lower part, or bed, makes the removal of the whole boot practicable, should such a measure at any time be found expedient.

It will be remembered that baron Larrey has lately practised a somewhat similar mode of treatment for fractured limbs, with much success. The baron does not make use of a case of plaster of Paris, but surrounds the limb with bandages which have been soaked in some glutinous matter, which forms nearly as firm an envelop as plaster of Paris.—*Brande's Quarterly Journal of Science, New Series, No.* 9.

The Plague.—Egypt was still open to us, and though the communication between Constantinople and Alexandria had been uninterrupted, that country had hitherto continued in a state of perfect exemption from the contagion. There is something inexplicable, and that one might be disposed to call capricious, in the way in which this dreadful disease spreads from one country to another, and we had been particularly struck with the observation of the Greek who acted as English Consul at Scio. Though within a few hours sail from Smyrna, where numbers were dying daily of the plague, he had no fear of its approaching the island; and during our stay of some days, we saw many Turks, who had come directly from that place, leap on shore without any interruption. "But," added the consul, "should the plague declare itself at Alexandria, (distant some hundred miles,) we shall certainly have it at Scio." He spoke confidently, and quoted many instances within his own memory of the like coincidence.

At Rosetta, (where the plague was raging,) for the first ten days we avoided as much as possible all intercourse with the inhabitants of the town, but did not confine ourselves entirely to the house, resolving to shut ourselves up when the number of deaths should amount to twenty daily. That period soon arrived, and the contagion continued to spread, though the rising of the Nile, and St. John's

day, about which time the symptoms of the plague are usually expected to abate, were fast approaching.

As soon as we had taken our resolution, and our doors were closed, major Vincenzo Taberna, who had frequently witnessed the ravages of this formidable disease, and who was consequently quite *au fait* at the necessary precautions, took upon him the management of our voluntary confinement.

The house we occupied had double doors, and in the space between them, we placed two very large jars filled with water, which was charged once in the twenty-four hours; and having provided ourselves also with a fumigating box, to receive all our letters, we hired an Arab for a piastre a day, to station himself every morning under our windows, receive our orders, and purchase our provisions.

With respect to our bread, we took the precaution of never touching it till it was cool, as it is ascertained that in that state it does not communicate the plague. Even letters which have been fumigated must be allowed to cool before they are touched.

Our meat, whether beef or fowls, the latter being previously plucked, was all thrown into the water jars, from which, after a certain interval, it was cautiously taken out by one of the servants, who opened the inner door for the purpose. In this manner, we lived for several weeks, witnessing the most distressing signs of death and disease under our windows, from which we had frequent opportunities of seeing attacks of the plague, as it first seized upon its unfortunate victims. As far as we could judge from their gestures, they suffered most violent pains in the head, and were at the same time seized with violent retchings and black vomiting.

We lost three of the Arabs whom we had engaged to act as our purveyors in the town. When the mortality was at its height, the number who died daily amounted to about eighty.

It was impossible, however, to include in our measures of safety, the few English soldiers who were employed, together with about fifty Arabs, in looking after the horses piqueted in the camp without the town, but the judicious directions of their officers, and the ready obedience of the men in avoiding every occasion of touching either the native servants, several of whom died, or the horses of which they had the immediate care, saved them from any infection.

The exemption of the British soldiers from the attacks of the disease, is an additional instance in support of the opinion that the plague is only to be communicated by actual contact, for they were exposed to the same atmosphere, and to the action of the same general causes, as the less fortunate natives, who, like themselves, were employed in the care of the horses.

At one time, more than two thousand of the population of Rosetta were said to be ill of the plague, of whom the greater number did not confine themselves to their houses, but were seen walking about, to the great danger of the rest of the inhabitants. The Arabs and Turks, having no fear of the contagion, are in consequence always ready to lend every assistance to their sick friends, and it is, perhaps, partly to be attributed to this cause, that a greater number of Mahometans recover than Europeans; the latter being

generally deserted by their countrymen. The fearlessness of danger, and humane attention of the natives, occasion, however, a great spreading of the contagion, to which the custom that prevails among them, for the nearest relation to wear the clothes of the deceased, in the last duties paid to his memory, does not a little contribute.

We heard of no remedy for the plague: when the swellings broke, sea bathing was supposed to be very beneficial; but, after that event, the patients generally recovered without any remedy.

We found the opinion that the disease ceases on the 24th June, (St. John's day,) prevalent among the Franks as well as the natives of the country.

The Europeans, settled at Cairo and Alexandria, would not open their houses before that time, when they began to have cautious communication with their neighbors. This period, however, which had been so eagerly anticipated, and whose approach was hailed by the lighting of several bonfires in different parts of the town, did not, on this occasion, answer the general expectation; but, on the contrary, was marked by an unusual mortality, as the deaths on that day exceeded a hundred, a number considerably beyond the usual average.

Much beneficial effect is also attributed to the *Nokta*, or rising of the Nile, which begins on the 18th of June. Previous to this month, the Kamsin, or wind of the desert, which commences generally on Easter Monday, and continues to blow for fifty days, together with the stagnant state of the waters of the Nile, are supposed to occasion the unhealthiness generally observed to prevail at that sesson. So confirmed is this idea, that the Arabs are in the habit of congratulating one another, at the end of the Kamsin, on having escaped its baneful effects.

The two or three months previous to the summer solstice, are reputed so unhealthy, that the plague is said to exist in Cairo always during that period; at which time, also, the smallpox is very fatal.

When the natives are seized with the first symtoms of the plague, they wrap themselves up in their cloaks, and endeavor to promote perspiration by drinking large quantities of warm water. In a short time, swellings break out in the groin, and under the arm; and if they are alive thirty-six hours after the first seizure, they generally recover. We saw a Turk, at Alexandria, who had suffered several attacks of the plague, and he informed us, that as soon as he was able to move, he crawled to the sea side, in which he constantly bathed.

Neither iron nor wood convey the infection, though money is supposed to do so; a circumstance, perhaps, to be attributed to the custom that prevails among the natives of carrying it in a small bag, worn close to the skin. In this situation, it is certainly more likely to imbibe the matter of contagion secreted on the surface of the body; but whatever may be the cause, we always took the precaution to allow our money to remain in the water, at least half an hour, before we touched it.—*Narrative of a Journey in Egypt, in* 1812, *by Thomas Legh, M. D.*, pages 17, 176, &c.

Process of Emasculation.—The slaves collected by the jelabs, or slave merchants, from the interior of Africa, suffer great hardships in the course of their long and tedious journey to Egypt; and we were informed that the jelabs seized upon these periods of distress, arising from a scarcity of water or provisions, to perform the operation of emasculation, which, according to our informant, was done completely by the entire removal of the genitals. The wretches were afterwards buried in the sand to a certain depth, and in this rude manner the hemorrhage was stopped. The calculation was, that one out of three only survived the operation, which was performed at a moment of distress, that the risk of mortality might be incurred at a time when the merchants could best spare their slaves.

An eunuch was estimated at fifteen hundred piastres.

Girls, whose virginity was secured by means more powerful than moral restraint, were estimated at five hundred piastres; but such is the degradation to which the human species is reduced in this country, that the precaution serves only to produce abuses of a more revolting nature.—*Legh's Travels in Egypt*, p. 59.

Ophthalmia and Syphilis in Egypt.—During our residence here (at Miniet in Upper Egypt) we had an opportunity of observing the method practised by the natives, when they are attacked by the ophthalmia of the country, and which is simply as follows: When an Arab feels the first approach of inflammation, he binds a handkerchief round his eyes as tightly as possible, and endeavors to exclude the light and air with the greatest caution. At the end of three days and nights, the bandage is removed, and frequent bathing with cold water is afrerwards employed to complete the cure.

My servant suffered considerably from an attack of the ophthalmia, and found great relief from a small quantity of excessively fine powdered sugar being introduced every night between the eyelids; a practice recommended to him by a Greek doctor, whom he had consulted at Siout.

In his case, the inflammation was excessive; and he compared the great pain he suffered, to the pungent sensation occasioned by the eyes being filled by the smoke of burning wood.

As I have mentioned one of the diseases of Egypt, I may add that the symptoms of syphilis are, in this country, extremely mild; and are generally cured by the simple use of the warm bath, and an attention to cleanliness, which is not at other times so strictly observed by the natives.—*Ibid.* p. 167.

QUARTERLY INTELLIGENCE.

FOREIGN.

ANATOMY AND PHYSIOLOGY.

Experiments relating to the Reproduction of the Crystalline Lens. By MM. Cocteau and Leroy d'Etoille.

The means which nature employs are not often used to assist the loss which the eye receives by the extraction of the crystalline lens. Authors, for the most part, are silent on this subject; and those who have fixed their attention to it positively deny the reproduction of the lens. Thus Haller, in his "Elementa Physiologiæ," says that the lens, being a solid, cannot, like the humors, regenerate itself: "Lens cristallina fabricam sibi propriam solidam habeat neque humoribus debet accenseri, neque amissa renascitur."

The dissection of an eye deprived of its lens, says M. Tartra, presents remarkable appearances; at first the depression of the vitreous body, which corresponds to the posterior segment of the lens, is not replaced by any new body; the vitreous humor fills the space which it occupies; the capsule of the lens does not exist—it is removed by absorption. (*Thèse présentée au Concours de* 1811.) Already Tenon has announced this fact: "Cristallini fossula ab humore vitreo in ejus locum secedente repletur." Wishing to know if the observations or the assertions of the authors cited are correct, we have practised experiments on different animals, and have obtained results quite different to those which they have announced. We will not examine if this difference is because the researches have been made on eyes operated on in a perfect state, while in the other they have been made on eyes operated on, on account of cataract; we will relate only the results of our experiments; their accuracy may easily be verified by similar experiments.

MM. Cocteau and Leroy d'Etoille performed six experiments, by extracting the lens; and in all the cases, they found, in one or the other eye, traces of formation of a new lens. We give their last experiment as an example.

"On the 6th of June, 1825, we performed the operation of cataract on the eyes of two rabbits. After the lapse of a month, both could see very well; but through some accident one was killed, without our having an opportunity of examining the eyes. The other

was kept till the 18th of November, (i. e. more than six months,) when the examination of the eye was made in the presence of M. Fodera. The crystalline capsules were perfectly transparent; no cicatrix whatever could be observed; they contained lenses of a moderate size, and of as firm a consistence as those that we extracted. In order to acquire more certainty as to their nature, we plunged them into boiling water, and saw them immediately become opaque, hard, and friable, like the primitive lenses; merely the arrangement into bright lamellæ was only evident in the eccentric lamellæ."

From the experiments which we have just mentioned, it evidently results that the lens may be reproduced. But this fact, not known, or forgotten up to this day, gives rise to other questions. That the lens is reproduced, is it necessary that the eye should be in a perfect state to the moment of extraction? The lens being removed on account of cataract, is it replaced by another? The persons who, after the operation for cataract, could see without the aid of convex glasses, do they owe this faculty to the formation of a new lens? Will the lens continue to be classed among the living solids, or can this property of reproduction be likened to the other humors of the eye? We will content ourselves at present with proposing the questions, and will defer answering them till we have gathered sufficient facts to enable us to form an opinion.—*Jour. de Physiol.*

Case of Superfetation in a Single Uterus.—Dr. Fahrenhorst, of Justerburg, in Lithuania, relates the case. A woman forty-two years old, became pregnant for the second time, in September, 1825. Two years before this, she had borne a son—and enjoyed perfect health, and never menstruated during this interval. On the 28th of April, 1826, this woman felt something descend into the vagina; and supposing herself to be attacked with prolapsus, sent for E——, a midwife of the town. She found that it was a fœtus enclosed in its membranes, and prescribed rest. On the same day, about noon, this fœtus was brought into the world, with all its membranes, and without any sanguineous discharge. After its escape, the midwife perceived that there was another set of membranes; and the mother said she felt some motion within the uterus. At one o'clock of the next night, the pains commenced, and she brought forth another fœtus, living, but very little advanced, and surrounded only by a single membrane. Dr. Fahrenhorst was immediately informed of the circumstance, and, proceeding to the spot, ascertained the above related facts. This fœtus, which he considers as a four months' one, was four inches in length. The members, which had no nails, might be easily distinguished; and the head presented the ordinary disproportion relatively to the trunk. The first child was a nine months' one, and lived.—*Archives.*

Magendie's Remarks on the Brain.—These remarks were read at the Royal Academy on the 16th June last.

Of the cephalo-spinal fluid, the discovery of which by M. M. has already been mentioned in this Journal on several occasions, he says that he has now ascertained that its quantity in a middle sized

man averages about three ounces; women, all other things being equal, have a larger quantity.

The quantity is greater in old men, and may even amount to seven or eight ounces; but it is uncommon in such circumstances not to find some weakness of the intellectual faculties.

This fluid surrounds the whole brain and spinal marrow; and the stratum is of various thickness in different situations; in the neck it is four or five lines; in the loins, more than an inch; around the brain it is commonly one or two lines, and in certain cases and situations nearly an inch.

Among other very singular observations, we beg leave to call the attention of our readers to the following. This distinguished physiologist asserts that the brain is not always of an invariable size in the same individual; but, like the muscles and other parts of our frame, is subject to great diminution in sickness; and that the place yielded by the lessening brain is occupied by this cephalo-spinal liquid. He says that he has had many opportunities of satisfying himself that, in cases where a person has had a permanently contracted or immoveable limb for several years, a portion of the brain has disappeared, to the amount of a fifth or fourth part of a cerebral lobe, its place being occupied by a great hollow filled with the cephalo-spinal fluid; so that the cranium was always full. The object of the fluid seems to be to keep up a uniform degree of pressure on the brain and spinal marrow in all the varying circumstances of those organs; a pressure which, in consequence of the hardness and inflexibility of their coverings, could not be otherwise effected.

M. M. informs us that he had an old fox; which, having been caught in a net, was in good health, and exceedingly cross and disposed to bite. By means of an opening made in the back of its neck, he permitted all its cephalo-spinal fluid to escape; the effect of which was that the animal immediately became calm and quiet. M. M. now untied him, and let him loose in the garden; but he lay down on the place, and did not stir till the next morning. In the course of the day he began to move about a little; and, in thirty-six hours, regained his snappish and wild disposition. He now made a puncture again; and satisfied himself that the cephalo-spinal fluid had been entirely restored.

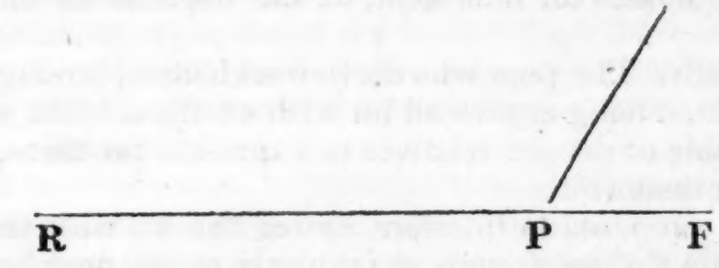
Distilled water, of the temperature of the animal, produced the greatest distress when thrown into the cavity after permitting the natural fluid to run out; the disturbance occasioned by it always ceased as soon as it was withdrawn.

When the fluid, after being withdrawn and cooled, was reinjected, the animal was seized with a general trembling, analogous to that which precedes a paroxysm of intermittent fever.

From all these experiments, he thinks himself warranted in the conclusion, that the cephalo-spinal fluid influences the functions of the nervous system, 1st, by contact with the surface of the brain and spinal marrow; 2d, by its chemical nature; and 3d, by its temperature—and that thus this fluid is entitled to take rank along with the blood, lymph, &c., in consequence of its utility in the animal economy.—*Journal de Physiologie.*

Rainey on the Changes of the Lower Jaw, as accommodated to different periods of life.—It may be advanced as a maxim in physiology, that nature, solicitous to preserve the integrity of the body, institutes certain alterations of form and structure, admirably adapted to encounter the necessities and exigencies of the various periods of existence; and that she manifests the greatest care in the preservation of those organs which are most intimately connected with the maintenance of life. As decrepitude approaches, we see her, by a gradual succession of changes, surrendering the body to the irresistible encroachments of time and decay. First, that elegance in the appearance, and exactness in the form, which characterize the plenitude of corporeal perfection, becomes gradually defaced and destroyed; secondly, the motions which were previously performed with alacrity, and capable of long continuance, become tardy, feeble, and of shorter duration; thirdly, the derangements which are manifest in the nutritive functions concur in announcing the approach of dissolution; and, lastly, the annihilation of the more vital powers, as those of the heart and brain, complete the final purpose. To demonstrate the justness and probability of the foregoing assertions, I think I can produce no better example than the changes which advancing age produces in the form of the lower jaw.

The lower jaw acts upon the principle of a lever of the third order, the properties of which are as follows: Suppose the line R F to represent a lever of this description; the power P required to overcome the resistance, R, must exceed the resistance as the distance from R to P exceeds the distance from P to F. For example: if the resistance R be equal to one pound, and the distance from P to F be eight times less than that from R to P, it will require rather more than eight pounds to overcome the resistance R. The disadvantage of this kind of lever is, that velocity must be sacrificed to power, or *vice versa*.



In the adult jaw, the distance from the power to the fulcrum is very inconsiderable; consequently, the masseter and anterior fibres of the pterygoid and temporal muscles act under a great disadvantage, as respects the power they can exert; but this is compensated by the increase of velocity, a circumstance highly desirable in the middle period of life. In the jaw bone of the child in whom the motions are not necessarily rapid, but comparatively forcible and of long duration, the angle formed by the horizontal and ascending rami is more obtuse. This occasions a considerable removal of the fulcrum from the power, and consequently furnishes a much more advantageous position for the attachment of the then feeble muscles which elevate the jaw, by enabling them to act with greater power

and a more protracted effort. In old persons, the angles of the jaw are advanced, causing an alteration in its form similar to that which has been noticed in the infant. This must materially augment the force which the muscles, then weakened by age, are capable of exerting. In this case, the sacrifice of velocity can scarcely be considered a disadvantage, as it is only consonant with the general decay of the body. I think the example here adduced will present a more striking proof of the wisdom and design of nature, when the great importance of the motions of the jaw in the function of nutrition, almost equally necessary at every period of life, is contrasted with the efficient and beautiful manner in which nature has accommodated it to the existing circumstances of the system, by endowing it with mechanical advantages for the exercise of power, proportioned to the enfeebled condition of its muscles and the decay of the teeth; the necessary consequence of that destructive process which awaits all organized matter.—*Lon. Med. Gazette.*

Guthrie on the supply of Bodies for Dissection.—The following plan is proposed under this system, and I would recommend the supply of dead bodies for public dissection to be derived from the following sources:

1. All persons hanged, or otherwise executed, and for all offences whatsoever.

2. All persons who die under sentence for criminal offences, whether in the hulks, jail, penitentiary, or elsewhere.

3. All persons who die in temporary or floating hospitals, in jail, penitentiary, or other place of detention, or prison, from whatever cause they have been placed there, and who have no friends to bury them.

4. All persons found dead, from whatever causes, in highways, canals, or otherwise, and who, having no friends to bury them, are sent to bone houses for interment, at the expense of the parish or county.

5, and lastly. The poor who die in workhouses, having no friends to bury them, having expressed no wish on the subject, and having no respectable or decent relatives to express it for them, either before or after death.

It is not proposed to interfere by regulations with the bodies of those who die without friends in regularly established hospitals; it being presumed that the surgeons of those institutions will properly apply them in the instruction of the students committed to their charge. In other words, it is not intended that the public schools of anatomy shall interfere with the private or public instruction delivered by surgeons in their own hospitals.

The means of supply being furnished, the following regulations are proposed, to ensure a fair and regular distribution, which must be enforced, in one way or other, by legal enactment. It being understood that there are no laws on the subject to repeal, save that one, or part of one, which directs murderers to be hanged until dead, "and their bodies to be given over for dissection," and for the reception of which bodies the College of Surgeons is bound, by their

charter, to find a proper place, which is at present in the vicinity of Newgate.

Laws proposed to be enacted.—1. Punishing all persons actually engaged in exhumating or stealing a dead body, or in selling it without authority, and who can be proved to have been so engaged after this session of parliament. For the first offence, six months to hard labor, and to find two securities, in fifty pounds each, for future good behavior; to be kept to hard labor until procured. For the second offence, double the punishment. Medical or other persons knowingly receiving such dead bodies, three months to the treadmill, and a fine of one hundred pounds; to be kept to hard labor until paid.

2. Rendering the practice of dissection, and the possessing of dead bodies, legal; and protecting the persons so employed, and their property, by the same laws as protect persons and property generally.

3. Directing the five sources of supply of dead bodies.

4. Declaring it to be illegal to require or to take during life, in any hospital, workhouse, or other place for the reception of sick, or poor people, securities in money or otherwise for the burial of such persons. Penalty, twenty pounds.

5. Declaring it legal, and directing all treasurers, governors, trustees, or others in authority, in hospitals or other places; and all vestries, church wardens, overseers of the poor, and others in authority, in the parishes, to give over for dissection to the College of Surgeons, or persons appointed by them, the bodies of all persons who have died, under their care or charge, without the means of burying them, and who have no relatives or persons previously known to have been friends, who are willing to do it; and all other bodies in their charge which come within the meaning of classes four and five, of the means of supply indicated.

6. Appointing the Royal College of Surgeons of London, by their secretary, or other person nominated by them, the proper authority or authorities, to whose order the bodies are to be delivered.

7. The Royal College of Surgeons to report quarterly to the secretary of state for the home department, on every point connected with this subject.

8. The funeral service to be read over all bodies (unless forbidden by law) before delivery for dissection.

9. Legalizing the sale of a dead body by the friends of the deceased, after it has been viewed in the usual manner by the parish or other authorities.

10. The council of the Royal College of Surgeons, in making regulations for the proper distribution of the bodies placed at their disposal, to find a proper cemetery in various parish churchyards for the interment of remains after dissection; and the council of the College to be authorized to make such charge for each body as may be considered proper; subject to the approval of the secretary of state for the home department.

11. All minor regulations of arrangement and detail made by the council of the Royal College of Surgeons, and approved by the se-

cretary of state for the home department, to be binding on the different persons concerned. Penalty, twenty pounds.

12. Every dispute which may occur, and every offence to which a penalty is attached, to be settled, by information laid in the usual manner, before any three police magistrates of the division in which the offence has been committed; and whose decision shall be final.

In order to enable all parties to act with precision, and a due regard to decorum, the following minor arrangements are proposed, under the authority of the secretary of state, to be varied from time to time, by his sanction.

The council of the Royal College of Surgeons, having the collection and distribution of all dead bodies intended for dissection, directs,

1. An establishment of men, four or eight in number, to be ready for service every evening in the winter season from six to ten o'clock, and to proceed as directed with a shell (in a manner similar to that at present adopted by undertakers) to the spot where the body is to be found.

2. An establishment of one or two plain hearses, with two horses, a driver, and an attendant, in black, (like an undertaker's party,) to be ready to go to greater distances.

3. The secretary, or proper officer appointed by the college, gives an order for the delivery of the body, which will be the receipt to the person who delivers it.

4. The servant of the College who receives the body, delivers it again, according to an order received to that effect from the secretary; and the anatomist or gentleman who receives the body from him, gives an acknowledgment, signed by himself or his assistant. —*Medico-Chirurg. Review.*

Experiments on Cutaneous Absorption. By Dr. Westrumb.—*Exp. I.* Dr. Westrumb, having prepared a bath of the temperature of from 20° to 22° of Reaumur, containing a grain of hydrocyanate of potash, two grains of nitre, and some grains of musk, he placed his arms in it as high as the elbows, and kept them there for three quarters of an hour. The bath having then been removed, the doors and windows were opened to change the air of the room; nevertheless, the odor of musk was manifest in the pulmonary exhalation of the experimenter. He voided his urine immediately after the use of the bath, and at one hour, five hours, and thirteen hours subsequently. The urine passed after the first hour, exhaled a feeble odor of musk. Two specimens were taken of each portion of urine, one to be treated with tests of hydrocyanate of potash, the other for those of nitrate of potash. The presence of the prussiate was distinctly visible in the first specimen, in the second there was no evidence of the existence of nitre.

Exp. II. Was a repetition of the preceding experiment, the author enclosing his mouth and nose in a tube, one end of which passed out of the room, the whole so contrived that he breathed only the external air. After the experiment, the pulmonary exha-

lation was impregnated with the odor of musk, but not so strongly as in the first experiment. This odor was not perceptible in the urine passed a short time after the experiment; but the hydrocyanate of iron was very perceptible in it; nitre could not be discovered in it.

Exp. III. Was a repetition of the preceding experiment, and with the same results, but the experiment was not as carefully made.

Exp. IV. This was a repetition of the two preceding experiments. Every care was taken, and the experimenter continued to respire by the tube for a long time after the experiment. The results were the same as before, only the odor of musk in the breath was less, and disappeared sooner.

Exp. V. The tube being applied to the mouth and nose, the experimenter placed his arms, as far as the elbows, in a bath of a strong decoction of rhubarb; and had one of his legs rubbed with opodeldoc. He continued his arms in the bath an hour and a quarter. After the first quarter of an hour, the breath had a decided odor of camphor, which increased during the experiment, and was perceptible for six hours afterwards, but feebly. The urine passed a little while after the experiment, and that which was voided at the end of three hours, was of a reddish brown color, when a solution of potash was added. This color is attributable to the presence of rhubarb, for the same solution of potash mixed with urine passed *before* the experiment, did not cause a similar change of color. It cannot be said whether the camphor also passed into the urine, though the odor of that collected immediately after the experiment was essentialy different from that passed before the experiment.

Exp. VI. Two vesicatories, each the size of a crown, having been applied to the legs of a healthy laborer, who had previously taken a bath to cleanse himself, the lymph was evacuated, and cupping glasses placed over the sores made by the blisters. The man then took a pediluvium, of 20° Reaumur, containing hydrocyanate of potash, and the temperature of which was kept the same during an hour and a half. At the end of this period, the vesicatories had discharged much; but two hours afterwards, sufficient lymph had collected to enable a chemical analysis of it to be made. The small quantity of lymph collected, having been diffused in distilled water, was treated with a solution of hydrochlorate of peroxide of iron; the liquid assumed a light bluish green color, a certain sign that it contained hydrocyanate of potash; and proving that this had been absorbed. The analysis of the portions of urine voided one hour, three hours, and five hours after the bath, confirmed also this fact. They changed, on the addition of a solution of salt of iron, a beautiful blue color, which was most intense in the portion passed three hours after the bath. The subject of the experiment would not consent to be bled, so that the blood could not be analysed.

Exp. VII. A healthy and robust man continued an hour and forty-five minutes in a foot bath of 22° Reaumur, containing a strong solution of prussiate of potash. The man voided his urine

a little before the experiment, and also at two, seven, and eleven hours after the bath; the urine passed the second hour, on being treated with the hydrochlorate of iron, assumed a fine blue color, which showed itself more slightly in that passed at the seventh hour, and was scarcely perceptible in that passed at the eleventh hour. Some ounces of blood were obtained from this subject, by means of scarifications and cups to the thighs. The clots of blood being treated at first with a little nitric acid, were diffused in distilled water, and then submitted to the action of hydrochlorate of iron; it seemed to contain some slight but indistinct vestiges of hydrochlorate of potash.

Exp. VIII. Four ounces of blood were taken from the arm of a person who had remained two hours in a foot bath, of from 20° to 22° Reaumur, in which had been put half an ounce of hydrocyanate of potash, and two ounces of nitre. This blood contained evidently hydrocyanate of potash; as to the nitre, its presence was not distinctly evident. The urine contained the hydrocyanate of potash.

Exp. IX. A person introduced his arms as far as just above his elbows, into a bath containing a decoction of rhubarb; on withdrawing his arms from the bath at the end of an hour and a half, they were scarified, and cupping glasses applied to them, by which means some blood was obtained. This blood being diffused in water, and treated with a solution of potash, assumed a deep brown color. The same change of color, indicating the presence of rhubarb, took place in the urine passed a little while after the use of the bath.

Exp. X. After having opened, emptied, and covered with cupping glasses the vesication produced by blisters in a healthy man, his feet were placed for an hour in a bath composed of a saturated docoction of rhubarb. About a grain of lymph was collected in each cupping glass; this lymph, as well as the urine, contained rhubarb.

Exp. XI. The hind legs, and the greater part of the body of a dog, was shorn close, great care being taken not to injure the epidermis. The animal was afterwards held for half an hour in a bath of 20° Reaumur, to which had been added a saturated solution of hydrocyanate of potash. The dog having been strangled after the experiment, the blood of the vena cava, the urine of the bladder, the chyle of the thoracic duct, were collected, and the lymphatic ganglions of the groin. The prussiate of potash showed itself very distinctly in the blood, but not in the chyle of the thoracic canal, or in the inguinal glands. On dropping a solution of hydrochlorate of peroxide of iron on the adipose panicle, here and there a bluish green color was produced.

Exp. XII. Another dog was deprived of its hair in the same manner, and frictions made on the shorn parts, with a weak tincture of cantharides, until the skin assumed a red appearance; the animal was then immediately placed in a bath similar to that used in the preceding experiment, in which it was also kept half an hour. The presence of hydrochlorate of potash in the blood of

the vena cava, and in the small quantity of urine found in the bladder, was distinctly observed; it showed itself also in the chyle of the thoracic duct, and in the lymphatic glands of the groins; and the whole of the internal surface of the skin of the hind limbs and of the abdomen assumed a fine blue color.

Dr. Westrumb draws from these experiments, as well as other facts, physiological, pathological, and therapeutic, the following conclusions:

1st. The skin is endowed with an indeterminate faculty of absorption; it can admit and introduce into the circulation all sorts of substances, from the least to the highest degree of fluidity, provided they are soluble.

2d. Some irritating substances which break or destroy the epidermis, are absorbed more quickly, and in greater quantity, than mild and nonirritating substances; first, because, by destroying the epidermis, they remove a first obstacle which opposes itself to their easy absorption; secondly, because that the irritation which they produce augments the activity of the absorbent veins; thirdly, finally, by overcoming the repulsive force of the lymphatic vessels, they incite these to take part in the absorption.

3d. Mild articles, which do not affect nor destroy the epidermis, are absorbed more quickly when the epidermis is injured or removed, than when it is perfect; because, when the cuticle is removed, the contact of the foreign substances with the absorbents is immediate.

4th. The vessels of the skin which possess the power of absorbing, are some veins and absorbents. The first absorb always; the second do not take part in the absorption of heterogeneous substances here, as in other parts of the body, but when their repulsive force has been overcome, or when some cause makes them deviate from their normal action.—*Journal des Progrès, Vol. XI.*

On the Effects of the Gastric Juice on the Stomach after Death, and on Abstinence.—Dr. Pommer has instituted a number of experiments on dogs, cats, and rabbits, to ascertain the correctness of the opinion of John Hunter, relative to the dissolving action of the gastric juice upon the stomach after death; and he has arrived at the following conclusions: In animals the gastric and intestinal secretions neither soften nor dissolve the membranes of the stomach or intestines; the secretion of these fluids is rather diminished than augmented during hunger; neither does the latter produce inflammation of the stomach; and death from inanition is the result of the general prostration of the vital forces, and not of inflammation of the stomach. Carnivorous animals support hunger better than herbivorous, and cats better than dogs; carnivorous animals who, during abstinence, drink water, live longer than those deprived of drink. Rabbits die often of inanition, although they have still some aliment remaining in their stomach; these animals never drink; when, driven by hunger, they take meat, they die in a short time afterwards, although they can digest this substance, as is easily shown. In animals destroyed by inanition, the veins of

the lower stomach are ordinarily gorged with blood.—*Archives Générales, Dec.* 1828, *from the Medic. Chirurg. Zeitung.* 1828.

Menstruation at the Age of Nineteen Months.—A case of this kind is related in the third number of *Meckel's Archiv. fur Anat. und Physiologie*, for 1827. At birth this child was of an ordinary size; but after the first month she commenced to grow rapidly, and at nine months it was of the usual size of a child of a year and a half old. About this time she passed from the vagina some drops of blood; at eleven months of age, she had another and more abundant sanguineous discharge; and at the same time the mammary gland began to be developed, and hairs appeared on the mons veneris. At fourteen months she had a third, and at eighteen months a fourth, sanguineous evacuation from the vagina. The whole physical development of the child is precocious; but her mental faculties are not greater than those of other children of her age; she appears to have no desire for sexual intercourse.

Researches on the Anatomy of the Brain, presented to the Royal Academy of Sciences of Paris, by Dr. Foville, *Ex-internal Elève of the Civil Hospitals of Paris; Principal Physician of the Lunatic Asylum for the Department of the Lower Seine, &c.*

Gentlemen—During six years, in which I was connected with the medical service of the hospitals of Paris, I had the privilege of being placed in immediate relation with those whose labors on the subject of the diseases of the brain have mainly contributed to the advancement of this branch of science. I endeavored to profit by the advantages of my position, by imbibing their observations, and making myself master of their doctrines.

For this object, it was most essential to have recourse to that foundation, without which all medical theories vacillate on the brink of annihilation—on anatomy, which has ever been most in arrear in that which relates to the structure of the brain.

It is true, that very important observations had been made respecting the general development of the nervous system, and on its gradual complication in the scale of animals; and that anatomists are pretty well agreed as to its general composition. We are, nevertheless, ignorant of the structure of its principal parts; and the most widely received opinions with respect to them, are, perhaps, nothing more than ingenious hypotheses, which accurate observation may overthrow.

I saw that it was necessary that I should examine for myself. The first object of my researches was to verify accredited theories. Their first result was to inspire me with doubt respecting the validity of those theories. In the course of these researches, I was struck with certain constant dispositions in the cerebral organization, which appeared to me to have been hitherto unnoticed. I multiplied my observations, and found that the facility of making them was increased by daily practice; and I soon became sufficiently familiar with the details of structure which I had noticed, to be able clearly to demonstrate them.

It is three years since I laid before my preceptors and colleagues, for their opinion, the anatomical preparations of the brain, which I made in their presence. I was animated by the confidence which their united approbation excited.

About the same time I had the opportunity of soliciting the judgment of those whose whole career had been devoted to the study of this subject; and if they were not all decided in favor of my views, by the greater number, the preparations, on which these views were founded, were considered to be conclusive.

My Essay was presented to the Academy of Medicine; but in consequence of the death of professor Beclard, who was appointed the reporter, the judgment of that learned society has, down to the present time, been suspended. Notwithstanding the Academy of Medicine condescended, not long after, to award its prize to an extensive essay on the functions and diseases of the nervous system, of which essay my anatomical researches formed a part.

Although, since that period, I have been removed from the capital, in order to take the charge of the medical department of the noble institution for the insane at Rouen, I have not ceased to pursue my anatomical researches, which I am now occupied in describing.

Before sending my work to the press, the greatest favor to which I can aspire, and the most imposing title which I can covet as a claim to the confidence of the public, is, unquestionably, the favorable decision of the Academy of Sciences. With the hope that the Academy will grant a few moments to the examination of my observations, I have requested to be allowed the honor of reading a summary of the facts which I flatter myself that I have proved.

Laying aside the historical examination of the subject, and taking up the science at the point to which I find it at present advanced, I shall, in the first place, say a few words respecting the spinal marrow, and shall afterwards describe in succession, what I have observed in the organization of the cerebellum, in the crura cerebri, in their expansion in the corpora striata, and thalami nervorum opticorum; and, finally, I shall speak of the organization of the brain itself, and of its principal parts.

To these anatomical data, I shall subjoin such physiological and pathological considerations as the subjects may elicit.—*London Philosophical Magazine.*

(To be Continued.)

Observations relating to the Function of Digestion. By A. P. W. Philip, M. D., F. R. S., &c. The author, referring to his former papers published in the Phil. Trans., concludes that digestion requires, for its due performance, both a proper supply of gastric secretion, and a certain muscular action in the stomach; the latter circumstance being needful for the expulsion of that portion of food which has been acted upon by the gastric juice. Nervous power is necessary for secretion; but the muscular action of the stomach being excited by the mechanical stimulus of the contents of that organ, is independent of the nervous power. It had already

been shown by the author, that after the removal of a portion of the eighth pair of nerves, the galvanic influence directed through these nerves, will restore the secretion of gastric juice. But Messrs. Breschet, and H. Milne Edwards, have lately endeavored to prove that the same effect results also from mechanical irritation of the lower portions of the divided nerves. The author points out several circumstances which appear to have been overlooked by these gentlemen, and which he thinks invalidate the conclusions they have deduced from their experiments. He states that a certain quantity of digested food will always be found in the stomach of the animal, for five or six hours after the operation, and even after the lapse of ten or twelve hours, from its being less completely changed; and, therefore, expelled more slowly than in the natural state. The paper concluded with the recital of experiments made for the author by Mr. Cutler, in which the contents of the stomach of a rabbit, whose eighth pair of nerves, after excision, had been kept mechanically irritated, were compared with those of another rabbit, in which the nerves had not been irritated, and of a third which had been left undisturbed. All those who witnessed the result of this experiment, among whom was Mr. Brodie, were convinced that the irritation of the nerves had no effect whatever in promoting the digestion of the food, neither did it at all contribute to relieve the difficulty of breathing consequent upon the section of the nerves.—*London Philosophical Magazine.*

PATHOLOGY.

Observations relative to the question, "Is the appearauce of the Blood abstracted as a remedial means, a just criterion in considering the propriety of repeating the operation of Bloodletting?" By John Davy, M. D., F. R. S., Physician to the Forces.

It is of importance, in so momentous a subject as the abstraction of blood, that we should come to some positive conclusion relative to the above question, and, whether negative or affirmative, that it should be well founded on facts, and not matter of opinion.

Let us first consider the appearances and qualities of the blood, which are commonly supposed to be indicative of inflammation, and to warrant, rather than forbid, further bloodletting. They are chiefly the following: An unusual degree of fluidity of the blood the instant it is drawn; unusual slowness in coagulating; and, when coagulated, being covered with a buffy coat, and cupped.

Relative to these appearances and qualities of blood, experience seems to show that they are met with in the majority of cases of local inflammation, but with shades, differences, and exceptions involving much difficulty and perplexity.

1. When the inflammation is violent, rapidly running on to suppuration, and very extensive, as attacking, at the same time, more

than one texture, or only the same texture, but in different organs, the blood drawn, I have observed, is often neither cupped or buffed. This I have witnessed most strikingly in cases of peritoneal inflammation, either pure or complicated, with inflammation of the mucous coat of the intestines, or with diffuse cellular inflammation.

2. In diffuse cellular inflammation, I have often noticed that the blood coagulated rapidly—as rapidly as when in health; and yet, being unusually liquid, exhibited a slight buffy coat; provided the vessel used for holding it was filled in a few seconds, and instantly put aside, and allowed to remain undisturbed.

3. In ordinary cases of inflammation, as of the pleura and lungs, the blood drawn at the commencement of the disease, is occasionally not buffed or cupped; but on repeating the operation the following day, the blood exhibits both these qualities.

4. In cases of inflammation of the mucous coat, whether of the air passages, or of the alimentary canal, the blood drawn sometimes shows the appearances and qualities enumerated, and sometimes not.

5. Experience does not seem to have established, even generally, any relation in point of degree, between these appearances and qualities, and the intensity of the inflammation. Sometimes the buffy coat in the blood is very thick, and the crassamentum is much contracted, and the symptoms of inflammation are not violent, and the recovery is not long protracted; and sometimes the reverse of this occurs.

6. In a large proportion of fatal cases, fibrinous concretions, or polypi, as they were formerly called, corresponding to the buffy coat on blood drawn, are found in the heart and great vessels; and, as well as I can judge from my experience, as often when the lancet has been freely used, or only moderately, or not at all.

The consideration of such facts, I must confess, deprives me of confidence in these appearances as indications for practice and the repetition of bloodletting, and induces me to conclude that, as a criterion in this way, they cannot be pronounced just or safe.

Let us next consider the appearances and qualities of the blood, commonly supposed to be connected with a state of the system, as it were the opposite of inflammation, and not to warrant farther bloodletting. They are chiefly, as it is supposed, a very soft crassamentum, very little, if at all, contracted—or the blood remaining liquid—or the proportion of crassamentum to the serum being unusually small.

So far as I am able to judge, these appearances and qualities of the blood are not proved by experience to be connected with the state of the system supposed.

1. In the remittent fever of hot climates, and in cholera morbus, both the common kind and the epidemic, the crassamentum of the blood drawn is generally softer than natural, and little, if at all, contracted; and yet bloodletting in these diseases is not generally injurious; it is often beneficial, and even when repeated.

2. Blood without fibrine, in any disease, is very uncommon. I have witnessed it only in cases of pulmonary apoplexy, and that

after death, in the cavities of the heart and vessels; but so soon after death, that it may be taken for granted that it was not a *post mortem* change; that it existed previously, and was probably connected with, and partly the cause of, the fatal effusion. In such cases, no one, I suppose, would have hesitated, if called in time, in abstracting blood, especially taking into consideration the plethoric habits of the individuals to whose cases I allude, and their previous apparent robust health.

3. The proportion of the crassamentum to the serum being small, may often be witnessed in acute diseases in their advanced stage, or in acute diseases, supervening on chronic, of long duration, or occurring to persons of great delicacy of constitution, of feeble health, and of valetudinary habits. In such cases, no judicious practitioner would think of using the lancet, unless that he considered it urgently necessary; and then, surely, he would not be prevented using it, even if certain of the blood being below par, in respect to the proportion of crassamentum it might yield.

Lastly, there is another, and extensive, and most important class of diseases, (were a classification formed according to the appearances and qualities of the blood,) in which the blood, as far as we have learnt from experience, is not apparently altered, as in the continued fever of summer, differing but little from the ephemera, as in the early stage of synochus; and as in apoplexy and tetanus, and many of the diseases strictly belonging to the neuroses, in the treatment of which bloodletting is often useful, and sometimes indispensable.

These considerations tend to support the former conclusion. It appears to me, that the more experience medical practitioners have, the less confidence they place in the appearances of the blood, in forming their opinion on the nature of a disease, and on the mode of treating it. What were the sentiments of the late learned and experienced Dr. Heberden on this matter? He says "the more we know of the human body, the more reason we find to believe, that the seat of diseases is not to be sought for in the blood, to the sensible qualities of which they seem to have very little relation; and though it be supposed to hold in all maladies, yet, in reality, it is but in very few that the blood affords the practitioner any useful information." This is called by Dr. Scudamore (from whose essay on the blood I give the quotation) a remarkable passage. In the state of knowledge of the blood, at the time it was written, there can be no doubt that the practical conclusion with which it ends was perfectly correct, and I fear it is still so, and believe that it is, though our knowledge of this fluid, since then, has been increased, and that it is so, even more srictly than expressed, even in all diseases, and without the exception of "very few." Is there, I would beg leave to ask, any one disease, in the considering and management of which the skilful and conscientious practitioner considers himself under the necessity of examining the blood? I am not aware that there is one such. In cases of pneumonia and pleurisy, it was, and is, perhaps, still, usual for the practitioner to look at the blood. Suppose the blood is not buffed, and in a few hours the

symptoms, generally, indicate the propriety of abstracting more blood, will the practitioner hesitate to abstract it, merely from the absence of the buffy coat on the blood first drawn? Suppose the blood abstracted in a case of pulmonary inflammation, supervening on tubercular phthisis, is strongly buffed, and the symptoms continue little, if at all, mitigated, will the practitioner, on account of the state of the blood, repeat the operation of bloodletting? Most probably he will not. He will consider rather the peculiar state of his patient, and endeavor to subdue the inflammation by other means.

Though I believe the time is not yet arrived that, in relation to practice, we can derive advantage from inspecting the appearances of the blood, yet it is to be hoped it will arrive; and that it will come seems possible, if the subject is carefully investigated in a strict scientific manner by those who are unprejudiced, and who are competent to engage in the investigation. Dr. Heberden, in the passage quoted, no doubt gave the result of *his experience*, which was unfavorable to examining the blood; but, as he has expressed it, it does not so appear. His conclusion is founded on an hypothetical basis, the soundness of which may be called in question.

It is an important question for enquiry, whether the blood is, or is not, the seat of some diseases; whether unhealthy blood has not an injurious effect in every instance; and, if so, what are its modifications and their effects. These are legitimate subjects for experimental enquiry. They can only be determined by experiments, carefully and laboriously made by the scientific physician, whose taste leads him to engage in such a pursuit, with zeal to support him through it, and opportunities such as a public hospital can afford. Such pursuits belong to the higher departments of the profession, and must be conducted in the quiet walks of science. They are, in relation to the ordinary mode of inspecting and examining the blood by practitioners, like the investigations of the philosophical navigator, in comparison with the observations of the trading mariner—the one intent on the natural history and physical laws of the terraqueous globe—the other limiting his attention to the circumstances which obviously, or are supposed to, expedite or impede his voyage, and render secure, or occasion risk to, his vessel. As it is advantageous that the two characters should be kept distinct in ordinary navigation, so it seems equally proper that in medicine the practical part should not be blended with the scientific, and that the practitioner should keep on his course, guided by certain experience, and, so far as science gives a steady light, enlightened by its rays, leaving the scientific physician to explore at his leisure, aided by the best methods and instruments of research, the doubtful regions of the profession, and investigate the mysteries of the system in health and disease. D. Scudamore, in his Essay on the Blood, is of a different opinion, and strongly recommends the attention of the practitioner to the appearances of the blood, persuaded that they will give "important information of the real state of the power and the action of the heart and arteries,

and of the condition of the system itself." And he points out a number of circumstances, to which he says the attention must be directed in bloodletting; as 1st, "the kind of orifice;" 2dly, "the stream in which the blood flows;" 3dly, "the state of the pulse during the bleeding;" 4thly, "the apparent density, the color, and other appearances of the blood on its first being received into the basin;" 5thly, "the time in which it coagulates;" 6thly, "the internal appearance of the coagulated blood;" 7thly, "the texture of the coagulum;" 8thly, "the comparative conditions of the several portions of blood in different cups;" 9thly, "the appearance and quality of the serum."

These, I admit, and other circumstances, deserve the attention of the scientific enquirer. I should hope, however, that the mind of the practitioner and his eye would be more intent on the state of the patient, than on that of the blood; and having made the orifice thought proper in the vein, the blood flowing as he could wish, that he would concentrate his attention on the effect taking place in the living system, if the case be an urgent one, and that he would observe whether there is abatement of pain, or of the sense of oppression; whether the pulse rises or falls as the blood flows; and reflect, judging from the supposed nature of the disease, and the immediate impression produced, on the extent to which the abstraction of blood should be carried. For my own part, I must candidly confess, that I have never been able to combine in myself the two characters of the practitioner and enquirer at the same time; and that I have always found it beyond my power to watch the pulse and countenance, and feelings of the patient, and study the fleeting appearances of the blood in a satisfactory manner; and, consequently, when I have attempted the one, even the investigation of a single property of the blood, I have always been a mere spectator, and have generally requested the practitioner to judge for himself, of the quantity of blood that should be drawn. And I would recommend the same plan of proceeding to most others; lest, in the ardor or interest of the scientific enquiry, the patient have not that attention paid him which is his due, and humanity suffer in a cause which should have humanity for its chief object and end, and the name of science, in its turn, suffer and fall into disgrace among those who do not distinguish between the genuine and false.

Malta, November 11, 1828.—*Edin. Med. and Surg. Journal.*

Case of a Man who fancied that he had a Serpent in his Belly, and upon whom the operation of Gastrotomy was pretended to be performed with success. (Condensed from *La Clinique.*)

The patient was a young countryman, a laborer in the fields, who fancied that he had swallowed a small serpent in a glass of muddy water. This alarming accident had occurred five years before he presented himself to M. Maury, at the hospital of St. Louis. The animal had grown to an enormous size, in the imagination of the unfortunate patient, and there was scarcely any part of the body upon which its visits were not occasionally inflicted; its most common

residence, however, was the abdomen. Laboring under such an hallucination, the mental distress of the patient may be imagined. He was fully convinced that nothing but an operation could relieve him from his tormentor; and, as it was evidently useless to reason with him upon the subject, the following *ruse de chirurgien* was practised.

To render the illusion complete, a large fold of the abdominal integuments was drawn up, and a bistoury was passed through. A living adder was secretly introduced into the wound, like a seton. The patient was then allowed to grasp the bleeding head of the animal, and to assist the surgeon in removing it from his body; which was, of course, happily effected. He felt the greatest joy at his deliverance, and was fully sensible the next day of the wonderful diminution of the size of his belly. The dreadful sensations he had experienced for five long years, and the hissing of his tormentor, no longer troubled him. He was completely well in a few days, and has since had no complaint.

One circumstance nearly renewed all his anxiety. He feared that some eggs of the serpent might be left behind; but this apprehension was removed by the adroit assurance of the surgeon that his late visitor was a male.

Disease of the Heart caused by Onanism.—Dr. Krimer, of Aach, has lately published an interesting paper on this subject. Our own experience has furnished us with several opportunities of seeing cases of the kind he describes; and, as the subject has not hitherto been particularly discussed, we shall give the leading points of his communication.

Dr. K. is of opinion that diseases of the heart, which have increased so much within the last twenty years, do not always depend upon organic alteration, but are very frequently produced by the baneful and lamentably frequent practice of the vice of onanism. Headaches, great anxiety, palpitations, faintness, an oppression and unusual sensibility in the epigastric region, are the first symptoms produced. They increase in severity in proportion as the subject gives way to the gratification of his unnatural propensity, and quickly diminish, or cease altogether, if he abandons it. To support his opinions, Dr. K. states many cases. He enumerates the following symptoms as pathognomonic of such affections of the heart; by an attention to which, the practitioner will be enabled to distinguish the train of symptoms from other diseases which are not unfrequently suspected.

1. The hair loses its natural brilliancy, is remarkably dry, and frequently splits at the extremities. It falls off easily and in large quantities, especially from the fore part of the head. In persons affected with consumption, or organic disease of the heart, the hairs appear well nourished, and rarely fall off.

2. The eyes are dull, downcast, frequently full of tears, and without expression, and deeply sunken in their orbits. The edges of the eyelids are reddish, and surrounded by a bluish tint. In phthisical patients, and those with organic disease of the heart, the eyes

are brilliant, and always preserve their natural expression and vivacity. In young females, at the approach of menstruation, a blue circle is commonly observed around the eyes, but here, also, their brilliancy is undiminished.

3. The patient appears very timid, and unwilling to look other people in the face.

4. Periodical headache is common, extending from the occiput towards the forehead.

5. The power of sight is diminished, the appetite lost, and the tongue is usually loaded. A slight cough, short and difficult respiration, are generally present; but still the patient can draw a deep inspiration.

6. Pains in the stomach, with weight and pressure in the epigastric region. Patients with organic diseases of the heart have occasionally these symptoms, but in such cases they are not accompanied by those above enumerated.

7. A general feeling of lassitude and feebleness of the limbs, with pains in the lower part of the back. We would add, also, that pain and throbbing of the testicles, with uneasy sensations shooting up the spermatic cord, are frequently complained of.

8. The perspiration has a dull and sweetish odor, similar to that of infants at the breast.

9. If the vice of onanism be touched upon in conversation, the agitation and embarrassment of the patient invariably betray him.

10. If the practice be continued, the mind is at length enfeebled, the patient is incapable of mental or bodily exertion, and sinks into a state of somnolency.—*Hufeland's Journal.*

Absence of the Menses in a Woman in whom the other Signs of Puberty existed; Obstruction of the Extremities of the Fallopian Tubes, with Enlargement of the Uterus, which contained a membranous Bag full of Pus. By A. Reynaud.

A native of Flanders, who, though twenty-one years old, had never menstruated, was admitted a patient of the *Hôpital la Charité*, with disease of the spine, excepting which and smallpox she had never been ill. At thirteen she had the appearance of a woman, after which, though tall and well made, she grew but little. She never had the precursory signs of incipient menstruation, nor was she subsequently, at any period of the month, similarly affected. At the age of eighteen, she complained of a dull fixed pain in the lumbar region; yet the influence of habit enabled her still to follow her laborious occupations; but, the pain gradually increasing, she was soon almost, and ultimately quite, a cripple. Two months before her admission into the hospital, an abscess formed at the anterior and superior spinous process of the left ilium. When it was first examined at the hospital, the skin was of a natural color; the the tumor, of the size of a large walnut, fluctuated and disappeared by pressure. As yet there were no signs of fever. The usual treatment of psoas abscess was instituted; but the disease became daily worse, and the patient at length died, worn out by constant suppuration and pain.

After death, one of the vertebræ was found to be nearly destroyed; the femur, ilium, &c. were also much diseased.

The uterus was large enough to be mistaken for that of a woman about six weeks pregnant; exhibited very evident fluctuation, but no fluid escaped through the neck, although this part, more than commonly capacious, was pervious, but partly filled by a whitish, glairy, cohesive substance. An incision being cautiously made through the parietes of the womb, its cavity was discovered to be enlarged and completely occupied by a false membrane, which closed up the orifice of the neck and those of the fallopian tubes. This sac adhered rather intimately to the walls of the uterus, from which it was easily separated, though not united to them by cellular membrane. This sort of cyst contained about three or four ounces of a yellow, grayish pus. Its internal surface resembled a mucous membrane without villi. A black substance, like the uvea, was deposited irregularly between this adventitious membrane and the uterus, whence it derived its mottled appearance. It was corroded internally in several parts, but not quite through; yet two of these ulcerations were extensive, deep, and bounded by the substance of the uterus, itself become soft and irregular. These ulcerations were situated posteriorly, and, therefore, at a distance from the spot where the neck of the uterus and fallopian tubes usually open.

No trace whatever of the uterine orifice of the fallopian tubes could be found. An incision was made along the course of these tubes, and a hog's bristle was attempted to be thence passed into the uterus, but this was found to be impracticable, since they became impervious as they approached the cavity of that organ, whence they were intercepted by a thin layer of uterine substance, and their diameter was in general much contracted. The caliber of the fallopian tubes was obliterated towards the ovaries. These bodies were more than an inch long, and several small cicatrices were observable upon their surface. Both contained in their centre a corpus luteum, of a brown red color; and several small fibrous bags in a wrinkled and collapsed state, but admitting of considerable dilatation. Many small oval bodies, as large as hempseed, hollow, and of a fibrous texture, somewhat resembling small eggs, were found in the course of the fallopian tubes, and within the folds of the broad ligaments of uterus.—*Journal Hebdomadaire.*

Abscess in the Cavity of the Meninges, cured by the Application of the Trephine. By M. Roux.—A boy, aged fifteen, had, for more than four years, a small fistulous opening in the left parietal region, in consequence of the opening of an abscess of the scalp caused by a blow. M. Roux, having been consulted, thought that there existed caries of the internal table, and that coma, which occurred when the pus did not flow freely, was owing to the accumulation of pus from this caries. He applied the crown of a trephine upon the fistula, with the intention of facilitating the passage of the portions of caries, or necrosed bone; he then found that caries did not exist; the fistula penetrated the dura mater. This membrane was incised, and he found that there existed an abscess in the cavity of the me-

ninges, which compressed the brain. When the pus was evacuated, he perceived a considerable depression on the middle of the left lobe: but this depression gradually diminished, and finally disappeared. The wound made by the trephine gradually healed, and the patient was cured.—*Journal Général de Médecine.*

Obliteration of the left Iliac Vein; Venous Circulation continued collaterally, &c. By M. Reynaud.—In the veins, as well as in the arteries, the course of the blood is not necessarily interrupted by the obstruction of a large venous trunk, since it may be kept up by collateral anastomosis, as well as by other means. This is accomplished exactly in the same manner as in the arterial system; at first a great many minute veins augment in size, and assist in conveying the blood from the parts below to those above the obstruction; beyond which some of the veins gradually assume their proper volume, while a few of them retain their newly acquired caliber. Although this state of the venous circulation has not been frequently, it has been correctly, described; yet such is the importance of the fact in a practical as well as physiological point of view, and especially in the diagnosis of some cases of dropsy, that the following details of a case, which was recently treated at the Hôpital la Charité, appear to be worthy of record.

A woman, aged sixty-one, who had been for some time under the care of the physician, came under that of MM. Boyer and Roux, on 22d July, for disease of the right haunch. Five months before, she began to feel pain in than part; some weeks after, it extended to the knee, and rendered walking difficult. She affirmed that she had never fallen upon her haunch, or in any way bruised it. At this period the right haunch was swollen, and the skin replete with varicose veins. This thigh was about two inches shorter than the other; the great trochanter was observed to be nearer the spine of the ilium than is usual.

The nature of the disease was immediately recognized, and its fatal termination anticipated. The attention of the surgeon was particularly attracted by a very large vein, which, from one of the crural veins, extended across the abdomen, making many irregular turns till it reached the umbilicus, and then it returned back to join the opposite crural vein. At its origin it was single, and afterwards divided into two or three branches, which, soon uniting again, terminated in a single trunk. When the patient was in the erect position, this vein was as large as the little finger. It appears that the patient did not notice the unusual size of this vein till after she had been affected with pain in the haunch and difficulty of walking.

MM. Boyer and Roux, being persuaded that this was a case in which, owing to obliteration of a large vessel, the circulation was kept up collaterally, and that nearly all the blood of the left was conveyed into the right crural vein, they endeavored to ascertain the precise direction in which the blood flowed, and found that it circulated from left to right. Though there was little doubt as to the obliteration, more or less complete, of the left iliac vein, yet its precise date was not known. Though the patient affirmed that it had but

recently existed, yet she related that, between the age of ten and seventeen, her left inferior extremity became œdematous, and the least exercise made her foot swell so much that she was obliged to go slipshod. The swelling subsided by repose. She married at twenty-one, and, on her becoming pregnant, both her legs became œdematous, but the left considerably more so than the right. After her confinement, the swelling of the right leg disappeared, while that of the left continued as before. At this time she was subject to palpitation, to colic, and a slight cough; and from time to time the submaxillary glands were enlarged, though her health was not in other respects bad. At a later period she took a voyage to Martinique, were she resided several years.

During her abode in the hospital, and long before, she was extremely thin, the pain in the haunch unremitting, and latterly she was reduced to a mere skeleton. The feet were both œdematous, but the left more so than the right. The appetite failed; diarrhœa supervened; the gums and tongue were covered with aphthæ; deglutition became difficult; she had frequent nausea and pain in the epigastrium. At this time her debility was extreme, pulse small and fluttering, and she died on the 4th of August.

Inspection of the Body. The iliac vein is entirely obliterated from just above the hypogastric to where the superficial vein of the abdomen joins the crural, about the space of four inches. Throughout its whole course it is surrounded with a cancerous production, from which it is difficult to distinguish it at first sight; but, by attentive dissection, it is found to traverse this mass, and, after appearing a mere cord, solid and compact, again becomes pervious towards the crural arch. The hypogastric vein and its branches were in the same manner obliterated. At the part where the vena saphena empties itself into the crural, a large venous trunk arises from the latter, which is discovered, both by its course and origin, to be the superficial vein of the abdomen. At first taking an oblique direction upwards and inwards, it rises as high as the umbilicus, subdivides into three large branches, which, assuming the form of an arch, descend towards the crural of the other side, after again becoming a single trunk. Near its origin likewise arises another branch, less volumnious, which, after transversely crossing the hypogastric region, terminates in the right crural vein, at a part corresponding to its commencement in the left. Thus it became sufficiently manifest that the blood, returning from the left inferior limb, had ceased to pass by the iliac vein of that side, but, on the contrary, circulated through the right iliac by means of the collateral branches. The crural vein, where the superficial one of the abdomen enters it, is unusually large; and the caliber of the corresponding iliac equally augmented.—*Journal Hebdomadaire.*

Case of Inflammation of the Umbilical Vein, with Infantile Erysipelas. By Robert Lee, M. D., Physician to the British Lying-in Hospital.

An infant, four days after birth, was attacked with erysipelatous inflammation of both fore arms, and severe febrile symptoms. Two

days after the first appearance of redness and swelling of the integuments of the arms, a similar affection was perceived in those of the hypogastrium, genital organs, and upper part of the thighs. The child died on the twelfth day subsequent to birth, and was examined on the 18th of November, 1828, two days after death.

The cellular tissue of the affected parts was highly vascular, and in the inguinal regions infiltrated with serum. On opening the abdomen, the peritoneum covering the different viscera was found in a healthy condition; but the umbilical vein, from the navel to the liver, was preternaturally indurated and distended. On laying it open, a yellow colored purulent fluid escaped, and the whole of its interior surface was found lined with a layer of closely adhering lymph; this coating of lymph extended into the principal branches of the umbilical vein, proceeding to the liver, and along the ductus venosus, as far as the venæ cavæ. The umbilical vein and ductus venosus remained pervious, and there was no morbid appearance in the venæ cavæ above or below its entrance. The coats of the umbilical were much more thickened than they are usually found to be at the same period after birth.

Morbid appearances of the umbilical vein in young children, similar to those which I witnessed in the foregoing case, have not been described by any pathologist in this country, as far as I have been able to ascertain. In the writings of Gaithshore, Bromfield, and Underwood, we find little, indeed, that is satisfactory, respecting either the nature of infantile erysipelas or the alterations of structure which accompany it. That inflammation and suppuration of the umbilical vein and its branches not unfrequently occasion fatal erysipelas, or death, without any inflammation of the surface, in new born children, I am disposed to infer, not from the preceding instance alone, but from the observations of several continental writers on the subject, and from the acknowledged pernicious effects of purulent matter when secreted within the veins of the adult.

Professor Osiander found the lungs inflamed, and the umbilical vein, from the navel to the liver, filled with a yellow fluid, in a child who died of erysipelas a short period after birth. In the body of a child, seven days old, examined by Meckel, the umbilical vein was found inflamed, and its inner membrane covered with a layer of pus, and perforated with small ulcerations. In another child, attacked soon after birth with vomiting, colic, diarrhœa, jaundice, and fever, he found the peritoneum inflamed, and a puriform effusion in the abdominal cavity. The branches of the venæ portæ, and those of the umbilical vein, were swollen, and their coats much thickened.

M. Breschet has repeatedly observed this inflammation of the umbilical vein and its branches in the bodies of children who had died a few days subsequent to birth; and he is disposed to consider this phlebitis as the sole cause of death in many of these cases.—*London Medical and Physical Journal.*

Singular Case of Insanity caused directly by a Fall on the Head.—A teacher of gymnastics fell from the top of a steep high stair head foremost, and pitched upon his head on a stone floor, where he lay

for a few minutes stunned. Next day his physician, Dr. Hausbrand, found him abed, in full possession of his senses, and complaining only of a pain in the head, on which no farther injury could be detected except a few superficial excoriations. He had passed a good night, the pulse and respiration were natural, and the functions of the brain were quite unaffected. This prosperous state continued two nights and a day, when matters suddenly took a different turn, without any fresh cause, and in the course of an hour he lost his reason so completely, that he spoke unintelligibly, got out of bed, insisted on leaving the house, stared right before him, would not answer questions, and did every thing confusedly and hurriedly. It was impossible to fix his attention on any thing, or rather he was constantly as it were absent in mind. Bloody serum at the same time issued from the right ear. In twenty-four hours more he became speechless, at least could not articulate, but from time to time uttered involuntary and unintelligible cries, and in reply to frequently repeated questions, answered *yes*, without any regard to its meaning. The tongue appeared to have lost its voluntary movements. Being placed in the warm bath, he at first evidently relished it; but on a bucket of cold water being dashed over his head, he screamed out and sprang from the bath, nor could any entreaty subsequently persuade him to enter it again; nay, whenever it was talked of, although in every other particular he was completely unconscious of what went on around him, he became greatly alarmed, and, calling out no! no! endeavored to make his escape. For three days this singular state continued, during which time he never expressed a want, though he ate and drank when food or drink was placed before him, and went to stool when he was placed on the night chair. He had no sign of bodily illness; but nevertheless his expression of countenance was that of an ideot. At night he slept well and composedly; in the day time he lay passive in bed like one in the deepest brown study. He allowed himself to be undressed without resistance, yet without giving any aid; or to be led up and down the room, but seemed to be perfectly a passive machine, and to have no will of his own whatever. Leeches, cold cloths, and blisters were applied without any advantage. After this state had lasted three days, a fit of epilepsy suddenly took place, for which he was bled without any relief, and the fits recurred frequently for three days. Still his stupid moodiness continued. At the end of that period, tartar emetic was ordered on account of some gastric symptoms; and after the operation of this remedy the epileptic fits became much milder. Next day, after the operation of another emetic, they ceased entirely, and the patient for the first time attended to what was going on around him, attempted to speak, and dressed himself. The emetic system was continued an entire fortnight, so as to excite vomiting three or four times a day; and during this period he recovered entirely, but with the following singular phenomena.

When he first tried to speak, although he had evidently an accurate conception of what he wished to say, he could not find the correct expression, or even a single proper word; but when any one spoke

the sentence articulately to him, he repeated it, and with evident satisfaction. He had exactly the appearance of a person who struggled to make himself understood in a foreign language which he spoke but imperfectly. In fact he had lost, not the power of speech, but the knowledge of language; and what was very remarkable, the languages which he formerly spoke most fluently, he had now forgot most completely. A Pole by birth, he spoke Polish most fluently before, and had been in the daily practice of conversing with his countrymen in that tongue; but now he understood much better his German friends than his Polish countrymen. Much less could he speak Polish, while nevertheless he spoke a little German, though not without help. With the Latin tongue he seemed still better acquainted; that is, he had not forgotten it so entirely. With Greek it was different; he had forgotten it as completely as the Polish. He could read Latin or Greek authors with whose works he was formerly acquainted; but he could not translate Greek at all, or Latin without assistance. Every day, however, his command of language increased rapidly, so that passages in Latin and Greek which were unintelligible one day, he could easily translate the next. His former facility in understanding various languages returned in the following order. First, he recovered his command of German, then he regained his knowledge of Latin, next that of Greek; and in the last place he recovered his command of Polish. It was also remarkable that in no other respect was any weakness of memory observed, or diminution of judgment, or of any other faculty of the mind. The discharge from the ear bore no relation to its progress; for both when his illness was at its height, and during convalescence, it occasionally ceased for twenty-four hours without any injurious effect. It is added in the narrative, that for some years before, this man was of a gloomy disposition of mind, had a timid look, and yellow complexion, and often thought himself sick; but that now his expression is clear, and his temper of mind cheerful.—*Edinburgh Med. and Surg. Journal, Jan.*, 1829.

THEORY AND PRACTICE OF PHYSIC.

Neuralgia Ophthalmica.—Among many casual notices of this peculiar ophthalmia, and unsatisfactory as casual, I must, however, distinguish the essay of Wardrop; the first, I believe, through which the attention of physicians was fairly called to it. To praise that essay for the accuracy of its description of a much neglected disease, is but to agree with all who have read it; yet I should be negligent of my duty did I not remark, that however perfectly my able friend has seen and discriminated this variety, his account is limited to the severer cases, and that he has not appeared to be aware, in his essay, whatever may be the case otherwise, either of the slighter and less marked, or even of the chronic, varieties, or of the extreme prevalence of this peculiar species; and that, in consequence, there is almost as much error prevailing, in practice, re-

specting it, even under the name which he has adopted, by those who have had the advantage of his experience, as there was before. Thus, also, I perceive no notice of its properly intermittent and alternating characters; while with respect to other portions of the description, such as the general fever, the bilious symptoms, the decided neuralgic and periodical pain, to which I may also add the utility of bark, I should desire no other evidence to prove that it demands the term which I desire to apply to it, and that it is in reality a mode of neuralgia. I shall, however, be able to produce much further evidence of its connexion both with that disease and with intermittent; and if I were inclined to express any surprize that so acute and experienced an observer had not formed the conclusion to the very verge of which he has approached, I should suppress that by recollecting, that in this as in every other disease which I have here described under this leading character, the foundation and cause of all the error must be sought in the want of a correct and broad view of the fundamental disease itself—neuralgia.

* * * * * * *

There is a peculiarity in the aspect of the inflammation itself, far easier to recognize than to describe, and by which alone it is generally distinguishable, even at a distance, and on a mere glance, to those who have acquired that experience which in other cases is called the *tactus eruditus.* I have sought in vain for expressions to say fully what this is; but I believe it to be as useless as difficult, since, however accurate they might appear to those who already know this inflammation by sight, they would not teach others to know it, inasmuch as no visible object can be justly described to the previously ignorant; while such a description would be useless to those who are already experienced in this ophthalmia. The more obvious character, however, is a dull, rather than a lively red color, not unfrequently attended by a tinge of yellow; the cause of which is especially visible in the sound eye when but one is inflamed, and the source of which must now also be obvious, particularly in autumnal cases. This inflammation occupies the whole conjunctiva, even to the verge of the cornea; and while the redness is rather produced by the minutest branches of the arteries than the large ones, the general aspect is almost that of an additional coat of red cloth in the severer cases, sometimes attaining a higher level than that of the cornea.

In severity, however, it differs exceedingly, from a mere general, and somewhat pale, redness of the conjunctiva, to that violent inflammation just noticed. Here, it is apt to resemble the celebrated contagious and purulent ophthalmia; but it can nevertheless be distinguished by attending to its progress and to the collateral symptoms, while it never, as far as I know it, suppurates on the surface, like that disease. This is a part of its history, however, on which I must yet speak with some hesitation; as, after many years of observation, whence I concluded that it never did suppurate, my opinions have been recently shaken by one or two cases, though I had not the opportunity that was necessary for satisfying myself as to the real nature of the disease in these. Whenever it shall, as a separate disease, have received from physicians the further attention

which it requires, this, and some other circumstances which I cannot now well elucidate, will be better understood; while I shall gladly avail myself of such information; though it will be necessary that this disorder shall be truly discriminated for this purpose, lest we return into worse confusion than that which I am attempting to rectify. * * * * * *

When there is no pain in the ball of the eye, it would seem that the conjunctiva alone is affected; while, when irritability to light attends, we must suppose that the neighboring vessels, and nerves, within the eye, are in that state, be it from sympathy or extension, which so often occurs in the rheumatism of the face, and in common neuralgia, where, added to the decided inflammation and pain, there is an excitement, a tenderness, or an irritability in the adjoining parts. It is not necessary that the eyelids should be affected, or that the inflammation of the conjunctiva of the eye should extend over that of the eyelid; though this happens in the severer cases, and, as it would seem, rather in the acute than in the chronic ones. It is a fortunate circumstance, that this inflammation is so much and so often resisted by the transparent cornea, as is the fact also in some other ophthalmias; but abundant instances of this do nevertheless occur. Rigidly speaking, and in the severer cases, the cornea becomes dull; and if this opacity proceeds, it at length forms a cloud or a spot which diffuses itself over the whole eye, while it is more condensed in the centre. Fortunately, even when very considerable, this commonly disappears, under proper treatment of the general disease, and even within a day or two; while I have seen it return many times, under different relapses and in successive seasons, without any more permanent effects. In such cases, also, it will sometimes be found, by means of a lens, that there is an ulterior disorder of the cornea, resembling very superficial ulceration; equally disappearing, and without bad consequences, with the general inflammation. Far more rarely does it affect the iris; but cases even happen, as I shall soon show, where that membrane alone is the seat of the disease; the neuralgic affection producing here a rheumatism of the iris, to adopt the common phraseology. * * * * *

A watchful physician will rarely fail to perceive that physiognomical mark of a cold stage at some period of the day, which I have so often pointed out; as the fever of this disorder is generally, but not invariably, a quotidian; while in many cases, that stage, and even a hot fit also, are distinctly marked. This is true even of the slightest varieties and of the most chronic or most habitual and repeated ones; while in the severer, acute, disease, the fever is strongly marked as a remitting, or even as a continuous one; as continuous at least as in simple remittent; though, under types more distant than quotidian, I have met few of a severe character; those of a tertian form which have occurred to me having been most commonly mild, or else chronic cases.

Such a febrile state is often, as usual, paroxysmal while the inflammation is permanent; but this is no cause for surprize, as the same happens in the rheumatism of the face, in that of the intercos-

tal muscles, and in other analogous affections, and also not unfrequently in the purer neuralgiæ, as in sciatica. Supposing this febrile state to be present or not, or to be more or less distinct, there is frequently a separate neuralgic pain accompanying the inflammation, throughout the disease, or, occasionally, for some days only; being the hemicrania, or the pain in the temple, or in the eyebrow, which I formerly noticed as sometimes preceding the attack; and being sometimes an extremely severe neuralgia. This is the symptom which forms that criterion for the disease which ought never to be mistaken, though in reality rarely attended to; and it is so marked, and so discriminating, that to pass it without notice, or, when present, to treat the disease as common ophthalmia, is unpardonable in even the most mechanical practitioner. * *

The person in question, an artizan under the patronage and care of an opulent family delighting in physic, was seized with the common neuralgia of the face, occasionally in its more ordinary form, and at other times under that of toothache. I was permitted to cure this by means of arsenic; but after a short time it returned in the temple, and was then followed by a tolerably severe ophthalmia, affecting the conjunctiva of the neighboring eye, and also attacking the iris. Nothing could be better marked than the disorder; as it was attended with a distinct intermittent and quotidian cold stage, and as the neuralgia of the temple was equally regular; while the contraction of the iris was also as periodical, occurring once a day, and lasting a determinate number of hours.

I attempted, of course, to explain my views of the character of the disease, while I proposed the method of cure; and with exactly the same success which I have generally had, as well with patients as with my brethren of the profession, for these twenty years and much more; at the manner of which I can now but smile, while I regret the price at which the unfortunate patients have so often purchased this imaginary triumph.

The patient was, therefore, sent to an oculist, at that time of high reputation; it having been concluded, as it is still, that neither physician nor surgeon could possibly understand a disease of the eye like the man of experience; such are the ideas attached by the vulgar to a word, which, if their meaning was the true definition of that term, would make the oldest nurse, or the empiric who sees a hundred patients in a day, the best physician; just as he who has manufactured the most tons of glauber salt and calomel in his lifetime, is the most philosophical chemist.

If, out of humanity to the unfortunate patient, I attempted to explain the case to the oculist, the suggestion was received just as I expected; and, from that time, I could but watch, for instruction, the progress of the case. The first effect of local bloodletting, blistering, and topical applications, was a great increase of the inflammation; and as the same means were continued and repeated, the disorder became daily more severe; while, the neuralgia also increasing in severity and extent, and the intermittent becoming much more strongly marked, it was declared that there was a flow of blood to the head; and so forth. General bloodletting from a vein, toge-

ther with that from the temporal artery, was, therefore, adopted and repeated; while, after a certain progress in this practice, aided by more topical remedies, more purging, and more low diet, the patient became so ill that he could no longer attend the oculist, and was, therefore, sent to a hospital. These operations occupied about two months; and if I was, after this, cut off from as frequent a sight of the patient as formerly, I was easily able to ascertain, before this imprisonment, that he was laboring under an inveterate quotidian intermittent, with a neuralgia that scarcely left any repose, extreme debility with various nervous affections, and a partial fatuity; all of them the effects which I had gradually foretold to his patrons, as any one may foretel them under such practice; while the inflammation was such as apparently to extend to the bottom of the eye, from the excessive and constant pain, and while total blindness on that side had also resulted from the complete closing of the iris.

In the hospital, all this, in the usual way, justified more bleeding and more of every thing which had already proved so injurious; while the disease persevered without a single feature of alteration, except for the worse, during nearly three months, when the gradually increasing fatuity became a mania, and the patient attempted to destroy himself by cutting his throat. The attempt was, however, unsuccessful; and after the wound was healed, he was sent home, to be transferred to a lunatic asylum, during which interval, I was enabled, for a week or more, to see him daily. He was then in a state of melancholy fatuity, rather than of proper mania; while the inflammation continued, but in a comparatively mild state, with occasional headache, apparently of great severity and still periodical, though the state of the intellect prevented any very accurate examination. What was done in the lunatic hospital, I could never discover; but in about two months he died, and, as I understood through his wife, with the eye still in the same condition. * *

Of the topical applications, I must observe, that there are even acute cases of this disorder, sufficiently teasing to the patient, and even alarming to timid ones, where the mere local use of stimulants does alone remove the disorder; the constitutional affection in such instances being, perhaps, trifling, or even, it may be supposed, nothing; or else disappearing spontaneously, or from slender changes of circumstances, as intermittents themselves, equally slight, so often do. In such cases, I know not that any thing is more efficacious than hot water, as hot as it can be endured; while in the chronic relapsing attacks it is often sufficient alone to the cure. In all these cases, acute as well as chronic, persistence is most necessary; but in saying this, I must also remark on a mistaken and injurious practice, not very rare, namely, that of applying ice; while I ought to say, generally, that cold washes of all kinds are either useless or mischievous. In the chronic cases, also, especially, very strong metallic solutions, such, for example, as sulphate of zinc in the proportion of ten grains to the ounce of water, often remove the inflammation; while this particular class of remedies also dissipates the opacities of the cornea, unless caused by pustule or ulceration, or unless very dense, from repeated attacks. No incurable opacity

from mere inflammation in this disease, ought in fact to exist; and when it is not prevented or cured, there has been neglect somewhere. Of other applications, opium, both within and without the eye, is often also useful; but let me remark here, that its chief, or almost sole value, is when applied on the subsiding of the paroxysm, or during that remission which can always, with care, be discovered; diminishing thus, as in all the neuralgic affections of tender parts, that soreness, or pain, or uneasiness, which persists after the proper paroxysmatic attack has passed away. Thus is also the internal use of opium useful in the same circumstances. As far as this substance is of use as an application in the chronic cases, it must, I think, be classed with the stimulant remedies already mentioned.

Lastly, in all the modes of this disease, that is, in the chronic ones at all times, and in the acute, whenever the febrile state permits, or when such evacuation as may be judged necessary has been premised, the remedies are those of intermittents and neuralgia; namely, bark, and the tonics, under all those regulations which I need not again discuss; though I ought to remark, that in numerous cases of the long continued and relapsing disease, and in many, indeed of the acuter or more severe ones, and even when of some standing, I have found both arsenic and bark eminently successful without any other aids, while rarely failing to cure a new case within even a few days. As usual in all other cases of neuralgia under every variety, the inflammation has been more tantalizing, and the remedies less actively efficacious, as it has been of longer standing and more subjected to a previous course of maltreatment; though I can scarcely, with any effort, recall a case to mind, of whatever character, which was not cured, when the patient's confidence corresponded to my own. These, in reality, are the true remedies of this ophthalmia; a fact which if it had been always known, would have saved thousands from blindness as well as from suffering; and not only so, but from broken constitutions or even worse evils; since the long persistence of this disorder produces the same effects as the similar duration of any intermittent or any neuralgia.—*Dr. Maccullough's Essay on Neuralgia.*

Case of Extraordinary Universal Emphysema.—A prisoner, in a workhouse at Meiningen, who had been for some time affected with dropsy in consequence of long intemperance, and the meagre diet allowed by the establishment, received from one of the overseers a chastisement, which next day left no other mark except an ecchymosed spot in the left lumbar region. On the second day the neck, face, and breast began to swell; and from the crepitation felt on pressure, it was evident that the swelling arose from the effusion of air throughout the cellular tissue. He made no complaint, however, and, in particular, his breathing was as free as usual. In the course of the subsequent night the swelling rapidly extended also over the whole head, trunk, and extremities; at the same time he was seized with great anxiety, severe cough, and a sensation as if the lungs were gradually pressed more and more upwards; and towards

morning the sense of impending suffocation became so dreadful, that he entreated his attendant to give him his shoemaker's knife, in order to make incisions in the skin to let out the air. In the morning, when the relater, *Dr. Jahn*, saw him, his state was so frightful, that it appeared as if a farther delay of fifteen minutes would have been enough to put an end to his sufferings. He sat upright in bed supported by the attendants. The head, trunk, and extremities were at least one half thicker than natural. The upper eyelids projected like two bladders of the size of apples and the eyeballs were emphysematous, and projected from the sockets. The organs within the mouth were also puffed up with air. The scrotum was as big as a hat, and the penis as thick as a stallion's. A peculiar oily sweat covered the whole integuments, which sounded, when struck, like a wet drum, and crackled when handled. The dyspnœa was most urgent, the respiration being exceedingly frequent, hurried, hissing, and accomplished with the neck projected like that of a horse at speed, and the hands grasping the chair convulsively. There was likewise froth round the mouth, a frequent suppressed cough, incapability of speaking, but perfect sensibility.

A trocar was immediately thrust into the scrotum, from which an inodorous air rushed out with great force and a hissing noise, and to the patient's instant relief. The swelling rapidly subsided every where, the breathing became much easier and deeper, the patient was able to speak again, and joked about his blown up appearance. His account of his previous sufferings was that he felt the lungs gradually pressed more and more upwards, and more and more closely, then a sense of tightness in the region of the glottis and throat, and at length a feeling as if he was choaked from within outwards. As the aperture in the scrotum was insufficient for the discharge of the whole air, other perforations were made on the extremities, back, and breast. Still the air evidently continued to be pressed into the subcutaneous cellular tissue, and it was prevented from accumulating only by the new incisions. As soon as the patient's state of amendment would allow an examination, the chest was carefully explored, but the most diligent search could not detect any fracture, splinter, depression or curvature of any rib, or laceration of a muscle; neither did he feel the slightest pain or uneasiness internally, except tightness in the chest, which was greatly diminished.

The antiphlogistic regimen was strictly enjoined. Next morning he was very comfortable, and his state rapidly improved. For ten days the air continued to collect a little towards night; but it was always easily removed by friction and pressure. On the twelfth day the legs were somewhat œdematous; but the œdema was soon removed by appropriate remedies. It is evident that the emphysema, in this case, arose from a laceration of the lungs and costal pleura.—*Magazin für die gesammte Heilkunde*, 1828.

Sudden Death.—A woman, after an attack of typhoid fever, was making rapid progress towards the recovery of her previous strength

and activity, when one day she all at once broke off a conversation she was holding with her neighbor, made a convulsive movement, uttered a suppressed cry, and expired. The body was inspected next day, and every part of it examined with the greatest care; but nothing could be discovered to account for her death. In quoting this case from the Gazette de Santé, Hufeland adds, that several cases of the kind had occurred to himself, in patients convalescent from nervous fevers; and he considers them to belong to the description of cases that are usually called nervous apoplexy, or the simple apoplexy of Dr. Abercrombie. We have met with cases in the late epidemic, not, indeed, exactly parallel, because none of the patients died, yet agreeing precisely in their collateral circumstances. They were clearly, however, cases of deficient action of the heart, the affection being a state of excessive deliquium supervening with great suddenness, yielding to strong and continued stimulants, and of a kind which would undoubtedly have proved fatal in a very short space of time, if vigorous measures had not been promptly resorted to.—*Journal der Praktischen Heilkunde, October*, 1828.

SURGERY.

On the Use of the Nitrate of Silver, in the Cure of Inflammation, Wounds, and Ulcers. By John Higginbottom, Nottingham, Member of the Royal College of Surgeons of London.

The following letter of Dr. Storer, to the author, is particularly interesting. It is the unbiassed evidence of a looker on, who observes with accuracy, and infers with caution:

"Your late treatise had apprised me of your mode of using lunar caustic in the treatment of certain wounds and ulcers. I had not lost sight of the facts there detailed, and have been gratified to find, by repeated enquiries, that this plan of treatment continues to be confirmed by its success in your hands, and by other surgeons who have adopted it. It is now understood that it is capable of being extended with signal benefit, to old and extensively ulcerated legs; of which one case that I have seen is certainly an example. In cases of local disease, such success does not exceed the ordinary bounds of expectation; nor is it without analogy to the general application of this substance. When I heard that for some time past you had adopted the same plan of extinguishing cutaneous inflammation, not merely in symptomatic erysipelatous affection, but also in that constitutional erysipelas, which is often epidemic and always ushered in and accompanied with fever, I confess that I could expect no success from a practice militating so directly against the views generally entertained of the nature of this disease, and would give no ear to it without occular demonstration of its utility.

"I have now seen two cases of constitution erysipelas treated upon this principle, and as far as two cases well marked will go to authorize a conclusion, mine must be greatly in favor of the practice.

"The first was that of a healthy young woman, upwards of

twenty years of age, seized with rigor, followed by smart fever, and on the second day by a complete erysipelas of the face, extending to the hair on the forehead. The fever continuing with a further extension of the inflammation, after bleeding, purgative and saline medicines, and a small vesication having arisen on the cheek, it was judged necessary, on the third day, to apply the caustic over the whole extent of the erysipelas. The patient's own account was, that she suffered considerable pain for ten hours; but, from that time, the feverish symptoms ceased, and the inflammation was arrested and subdued.

"When I saw her the fourth day after the application of the caustic, there was neither fever, nor any remains of erysipelas. The face was as black as that of an African, but in a few days more, I found her free from all symptoms of disorder, the epidermis peeling off, and the complexion underneath quite natural.

"The other was a fine healthy boy of sixteen months old, who, after a feverish attack, had erysipelas on one hip and thigh, and extended partially to the leg. In this case, also, the fever and inflammation had subsided in forty-eight hours and upwards, after the application of the caustic. The account of the child's mother was that it cried very much for one hour after, then fell into a long and calm sleep, out of which it waked without fever, and called out for food. In three days afterwards, when I saw the child, it was quite well, and the scarf skin of the inflamed parts separating.

"This is the extent of what I have observed of this novel mode of treating erysipelas, and which has surprized as it has satisfied me. Sincerely wishing success to your endeavors to improve the practical part of your profession, I am, &c. JOHN STORER."

To this letter we may subjoin one from Dr. Marshall Hall, on the efficacy of the nitrate of silver in subduing inflammation of the absorbents.

"I have had an interesting opportunity of watching the influence of the nitrate of silver in a case of inflammation of the absorbents, and I will endeavor briefly to state the obvious effects of this remedy. The case was that of a young lady, aged twelve years; it began by a chilblain upon the heel; inflammation of the absorbents up to the groin followed; suppuration took place in twenty-four spots. The nitrate of silver was not applied during the first five weeks; this was very much regretted after its effects had been observed. The patient was seen by Mr. Lawrence and Mr. Wardrop, who both expressed themselves much interested in it.

"As the case would be long, I shall simply enumerate the effects of the application of the nitrate of silver in this case, as they presented themselves to my observation:

"1. It prevented suppuration in many places where the redness and tenderness were recent, yet such as before had inevitably led to formation of pus.

"2. If suppuration had taken place, the tenderness was still promptly removed, and the pus, from being thick, white, and opaque, was rendered first thin and somewhat limpid, and perhaps streaked with blood, and then, by degrees, perfectly watery and limpid.

"3. When the pus approached the surface, a small opening formed, by which it exuded, and it became unnecessary to use the lancet.

"4. The abscess was far more disposed to heal than any of those to which the nitrate of silver had not been applied.

"I may add that in several other cases I have seen the application of the nitrate of silver early, along the course of the inflamed absorbents, subdue the disease at once, rendering all other remedies totally unnecessary. I believe this would have been the case in the instance mentioned, had this remedy been applied very early.

"I am, &c. MARSHALL HALL."

"P. S. It may be well to subjoin the outline of another case, in which the nitrate of silver was useful:

"A little girl fell and cut the ring finger. The joint became permanently inflamed and swollen. The affection had subsisted three months when I saw it, preventing the little patient from attempting the piano forte. The nitrate of silver was applied every fourth or fifth day, so as to form an eschar over the whole inflamed surface, but not so as to give pain. The finger was quite well in a few weeks.

"The powers of this remedy in subduing external inflammations are altogether very remarkable, and, I think, not at all generally known."

The objects in the application of the nitrate of silver in punctured wounds, are to secure a free exit for pus, and to subdue inflammation. We have only space for the following cases.

"*Case* 18. A servant, aged twenty, slightly wounded the fore part of the index finger, at the first joint, by a bone of a hare, in dressing it. The wound healed in a day or two, and no notice was taken of it. A few days afterwards the finger became swelled and painful, and affected with a diffused inflammation of an erysipelatous character, extending to the back of the hand, and there it was bordered by a ring of a more vivid color. I applied the nitrate of silver nearly all over the finger, and upon the back of the hand, upon and beyond the inflamed border.

"On the following day the swelling remained as before, and the patient complained of heat of the parts to which the application had been made, and a small part of the finger which had not been touched was very painful. I applied the nitrate of silver to this point.

"On the succeeding day, the swelling had become puffy, and the whole finger and hand were free from pain. A few days afterwards, the hand was quite well. No medicine was given, nor was the patient prevented from pursuing her usual avocations.

"This case was the more interesting because I had two similar ones a short time before, which had been occasioned by wounds received in cutting dogs' meat, and which, under the ordinary treatment, had been several weeks in getting well."

"*Case* 25. This case illustrates the mode of treatment by the nitrate of silver, of some of those terrible effects of punctured wounds, which have been neglected in the beginning.

"B. Unwin, aged forty, washerwoman, applied to me on July 10, 1820, with severe inflammation and ulceration of the middle finger, arising from a puncture by a pin or needle, some time before.

There was much painful tumefaction, and the integuments had burst along nearly half the length of the finger, on the ulnar side, and over the middle joint, on the radial side. The probe did not, however, pass to the bone, or into the joint. I applied the nitrate of silver deeply in every part, and over the whole surface, and enveloped the finger in a cold poultice covered with cold water.

"On the eleventh, she reported that she had slept well for the first time for a whole fortnight. There was scarcely any pain, but she complained of soreness; the swelling had greatly subsided. The nitrate of silver was again applied, and the poultice and lotion continued.

"On the twelfth there were still swelling and pain; there was considerable bleeding from the wound, so that I did not apply the caustic well.

"On the thirteenth the swelling and pain were nearly gone. I repeated the application of the nitrate of silver, which induced bleeding from a fungous growth.

"On the fourteenth the swelling had nearly subsided, and the cuticle was separated all over the finger. The nitrate of silver was applied extensively over the wound, and abraded parts. It induced little bleeding, or pain.

"On the fifteenth the fungous was nearly removed; the wounds presented an appearance of slough over their surface. The nitrate of silver was applied to the fungous, which still remained.

"On the seventeenth the wound was much smaller, and the slough was separating. The nitrate of silver and cataplasm were applied as before.

"A similar report was made on the succeeding day.

"On the twentieth the slough was separating. The nitrate of silver and cataplasm were applied.

"A similar report was made on the twenty-second.

"On the twenty-fourth, the slough having separated, the integuments over it were found to be flabby and loose. The nitrate of silver was applied to them.

"By a continuation of this plan the wound gradually contracted, and, at length, when there was no further use for the cataplasm, the eschar became adherent, and the ulcer healed underneath. It appeared highly probable to me, that under any ordinary treatment, the finger in this case would have been lost."

"*Case* 61. M. Bosworth, aged sixty-nine, has had ulcerated legs for the last thirty-five years, and, during that interval, has had the ulcers healed several times, but for short periods only. The present ulcers on both legs are about twenty in number; two are of the size of a crown piece; the others from the size of sixpence to that of a pea; the veins are in a varicose state, and the legs are extensively inflamed; his sufferings have been very great; his nights have been entirely restless from excessive heat and pain. He has been scarcely able to follow his employment, of a framesmith, for many years, and he has almost always been obliged to sit to his work. I applied the nitrate of silver on the whole ulcerated and inflamed surfaces, after he had rested in bed, with poultices on the ulcers, for twenty-four hours; and I gave him a blue pill and purging powder.

"At my next visit he said that he had not suffered more pain from the application of the nitrate of silver, than from some of his former dressings; that, on the following day, he had experienced scarcely any pain, and that he had had better nights than for many years.

"I examined the sores on the fourth day, and found them in a healing state; the inflammation was gone, and my patient suffered no pain. The nitrate of silver was reapplied, with the addition of Mr. Scott's mode of bandaging.

"This case was dressed every third or fourth day, for ten weeks, when all the ulcers were perfectly healed. During the whole of this time he followed his employment with more ease than he had done at any former period for thirty years.

"I directed the patient to continue to come to me twice a week, for a few weeks, that I might examine the bandages and apply the nitrate of silver to any tender or slightly inflamed spot, if any such should make their appearance."—*Medico-Chirurgical Review.*

Monteath on Iritis.—I. *Iritis Traumatica.* This species has been also called by the Germans idiopathica, because it is produced by a direct local injury, and not by any distant, sympathetic, or constitutional cause. It is most commonly induced by extraction, division, or reclination of the cataract, by artificial pupil making, and by mechanical or mechanico-chemical injuries of the cornea and iris. It is by no means intended to assert that every inflammation of the eye produced by these causes is iritic; but the majority are of this nature, and require for their successful treatment the method of cure suited to iritis. It was the careful observation of these cases terminating in false or membranous cataracts, partly formed by the remnants of the lenticular capsule rendered opaque by inflammation, and partly by effused albumen gluing these remnants together, that the celebrated Schmidt was first led to the accurate description of this disease in his admirable work on Secondary Cataract and Iritis. The operations for cataract being the most frequent causes of traumatic iritis, a description of it as it appears after these operations, and an account of its treatment under such circumstances, will sufficiently explain the nature and treatment of iritis arising from other mechanical causes.

The limits of this essay do not permit me to describe the kinds of operation, and the errors in operating which peculiarly tend to produce iritis. It commences as early, sometimes, as two hours after the operation, and it may occur from the first to the tenth or twelfth day, coming on generally in the night, with severe pain in the eyeball, supraorbital region, and side of the head, preventing sleep, and sometimes causing great agony. I have repeatedly seen a rigor and vomiting usher in the attack. The pains may remit in the morning, but they do not cease entirely, and they recur in the evening and continue through the night. If the eye be examined, which ought to be done with great caution so soon after the operation, the sclerotica will be found to have become rose red, near the border of the cornea. The conjunctiva is also more or less inflamed, and often swollen with serious and semitransparent chemosis. The

conjunctivitis and chemosis may become so considerable as completely to cover and mask the zone of inflammation on the sclerotica, so characteristic of iritis. The cornea is more affected in this iritis than perhaps in any other species; it loses its lustre, and its internal surface becomes even yellowish, which, it will be recollected from a former part of this essay, denotes that the capsule of the aqueous humor has partaken in the disease. The aqueous humor becomes also whitish, from a mixture of flakes of albumen, so that the state of the iris, &c. can hardly be discovered. This change of color in the cornea, and aqueous humor, occurs almost exclusively in the iritis which follows keratonyxis, not in that which follows extraction. The pupil, when it can be seen, is found to be immoveable, and in other respects as described in the second degree of iritis, except that change of color of the iris is often less visible in this than in the other species. The small abscesses and tubercles of lymph on the surface of the iris, also the arching or swelling forwards of this membrane, are seldom met with in this species, whereas retraction of the iris and pupil, causing an increased depth of the anterior chamber, is more frequently observed. The removal or destruction of the lens by operation, explains the latter circumstance. The inflammatory symptoms decline long before the nocturnal pains, which often remain for weeks, going off for days, and recurring without obvious cause. Marked synocha attends the more violent degrees and stages of this disease, and I have often seen the blood drawn as buffy as in acute rheumatism.

The terminations of traumatic iritis will be perfectly understood by recollecting the terminations of the third degree.

By proper treatment, the pupil may regain its size, mobility, and transparency; but in very severe or ill treated cases, more or less contraction of the pupil, its entire obliteration, or the formation of a membranous cataract, will be the result, the two latter requiring appropriate surgical treatment. Pus in the anterior chamber, forming hypopion, is more common in traumatic iritis than in any other kind; it may be in small quantity, and may be absorbed, or it may fill the anterior chamber, and cause the cornea to burst, terminating in total loss of the eye.

Treatment. This species requires the most active means to overcome it. General bleeding is always indispensable, and sometimes necessary three times within twenty-four hours from the attack; and there may even be occasion to repeat it on succeeding days, particularly if fullness and hardness of the pulse be present. Leeches may be of great service after the use of the lancet; but the surgeon who trusts to them alone, however liberally applied, will be wofully disappointed in the result. The patient should also be immediately put upon calomel and opium, so as to affect the mouth in a few days. For this purpose two grains of calomel and half a grain of opium may be given three times daily, till the desired effect be produced.

Antiphlogistic treatment must in every respect be attended to, but general bleeding, calomel, and opium, are the great means of cure. From blisters I have seen no benefit till the inflammation was on

the decline. Warm emollient poultices to the eye will relieve one individual; cold evaporating lotions will do good to another, in whom warm applications might be injurious; but upon the whole, the benefit from local applications to the eyeball itself in traumatic iritis, is, in my opinion, so trifling, that I seldom make use of them.

Mercurial ointment strongly impregnated with opium, may be rubbed upon the eyebrow morning and evening: the opium thus applied certainly alleviates pain—whether the mercury adds to its virtues, seems to me uncertain; but it is strongly recommended by oculists of the first eminence. The belladonna may be daily rubbed on the temple and eyelids, and the edges of the latter daily cleaned with tepid milk and water. When the disease becomes chronic, the vinum opii will be of great use. It is proper to observe, that the nocturnal hemicranial pain often continues unsubdued when the acute inflammation has subsided. In such cases, particularly if the individual be relaxed and feeble, wonderful benefit is derived from the use of bark. It would seem to destroy the irritability and morbid action of both the vascular and nervous systems, as is ably stated in John Hunter's work on inflammation, and this is a point of practice which we perhaps overlook too much in the treatment of inflammation, particularly of the traumatic species.

Iritis traumatica is seldom removed in less than three weeks; and after the operation of keratonyxis, it often assumes a chronic form, lasting for two months.

II. *Catarrhal-rheumatic Iritis.* This is the species most frequently met with in this city. It invariably originates either in a catarrhal or in a rheumatic state of the constitution; and hence two varieties of the disease are met with, the one attended with the usual symptoms of general cold, tending to rheumatism, by which I mean general soreness of the muscular system, accompanied with more or less synocha, a form of catarrh we are all acquainted with; the other variety occurs in individuals who have had frequent rheumatic attacks, and possess what has been called the rheumatic diathesis. Such people are seldom free from a rheumatic action in some part of the body, and it is often suddenly translated to the eye.

In the former variety, which I think may with propriety be called catarrhal-rheumatic iritis, the sclerotic zone of inflammation is often masked by inflammation of the conjunctiva, yet by careful examination it is discovered shining obscurely through. The conjunctiva of the palpebræ is also more affected than it is in the other cases of iritis. The pupil early becomes muddy, and the cornea loses its lustre. The pupil is often for some days rather above than below the natural size, and afterwards contracts, as described in the second degree of iritis. On comparing the iris with that of the opposite eye, a change of color is observed. Supraorbital pain almost always attends. This is the iritis which so frequently occurs during or after the exhibition of mercury, in consequence of this medicine powerfully predisposing the whole body to catarrhal and rheumatic affections.

The symptoms of the second variety, viz. the rheumatic, are the same, except there is often very little conjunctivitis present, showing

that the disease is almost wholly confined to the internal structures. Both varieties of this disease may run a very tedious course without completely destroying vision, leaving, however, in all cases when neglected, more or less organized lymph in the pupil, injuring vision. I have never observed pustules on the iris in this species.

Treatment. In the first variety, repeated venesection is necessary, to be succeeded by the liberal application of leeches to the brow and temple. In the second variety, general bleeding does not require to be carried so far, leeching and cupping the temple being for the most part sufficient. The degree of synocha present must guide us as to the extent and kind of bleeding. It is in the catarrhal-rheumatic iritis that I consider the mercurial treatment often more injurious than beneficial, unless the patient be in circumstances to leave off all employment and keep his bedroom. Mercury, no doubt, has hardly affected the mouth in these cases, ere the symptoms in many instances abate; but on the first exposure to the slightest cold, as from a currrent of air, a change of the head dress, or the like, the disease may recur with redoubled fury, and may thus be prolonged for months. I experience similar inconvenience from diaphoretics, which, though they afford relief during their operation, favor the production of relapses, and thus prolong the affection. Those not conversant with this disease can hardly imagine how readily cold tells on the eye. Leaving one room, and sitting for a few hours in another, larger, and not so warm, removing the linen compress from the eye, or throwing off the nightcap, will, in delicate habits, often produce a relapse. For these reasons I avoid the exhibition of mercury to the poor affected with this disease, and often even to the rich. In all cases when it can be accomplished, the patient should be confined to the house, and when the case is severe, to bed. The chamber should be darkened, and have a moderate fire in it in winter. After sufficient general and local bleeding, a large opiate should be given every night, so as to overcome pain, and as much salts in the morning as will open the bowels moderately. Small doses of nitre and cream of tartar should be given every two or three hours, and the diet must, of course, in both varieties, be antiphlogistic. Belladonna should be freely applied every day around the eye, a band of flannel should be constantly worn around the head, and several folds of linen over the eye, to prevent the effects of atmospheric changes on the neighboring parts. A blister behind the corresponding ear, or on the neck, is of more service in this than in any other iritis. During the nocturnal paroxysms of pain, much relief is obtained by fomenting the eyelids and parts around with flannel cloths, wrung out of hot water, or an infusion of tobacco leaves, taking care to leave the parts dry, and to replace the linen compress, previously heated at the fire. Lotions will be found worse than useless, but the vinum opii is serviceable in the decline of both varieties.

In spite of the best treatment, the inflammation in the catarrhal variety will last from two to four weeks, and the dimness of vision longer; and I have seen the inflammation in the rheumatic variety, in constitutions where the rheumatic diathesis was strong, resist all

measures for more than two months, the eye being nearly well one day, and the next, without apparent reason, being as bad as ever, just as is observed in rheumatism of a joint. In obstinate cases, therefore, of this variety, much more is to be done by remedies likely to remove the general rheumatic tendency, than by applications to the eye itself. I have often seen, however, great benefit from a rubefacient compound of laudanum and tincture of cantharides daily rubbed on the brow and temple, so as to keep up an irritation there. Though considerable blindness may remain long after the cessation of inflammation, it is wonderful what may be effected by a persevering use of the belladonna, by means of which, and the operation of the absorbents, good vision is always restored, provided the case has come under suitable treatment before the lymph has become organized. A weak ointment of red precipitate, about ten grains to the ounce, introduced once daily, is much recommended by German oculists, and seems to promote the action of the absorbents. From having treated a great variety of cases of rheumatic iritis, I can affirm that though it is often more obstinate and prolonged than either the traumatic or venereal species, yet the effusion of lymph is slower and less copious, consequently a great degree of membranous cataract and complete closure of the pupil are not very common results.

Some people of confirmed rheumatic habits, suffer exceedingly from one or more attacks of this disease every year, each succeeding attack leaving the eye in a worse state. Sea bathing in summer is sometimes of use in preventing relapses during the winter. I am acquainted with one gentleman who for more than ten years has been troubled with this disease, but who always escapes it when he passes the winter in Italy.

III. *Venereal Iritis.* This species is next in frequency of occurrence to the catarrhal-rheumatic. It is the consequence of constitutional syphilis or pseudo-syphilis, and, according to my observation, more frequently of the latter than the former. The skin or throat is generally affected at the same time, though the iritis sometimes gives the first warning that the constitution is contaminated, and is succeeded by the other symptoms. Cold is often the immediate exciting cause of this, as well as of other constitutional symptoms of lues. One eye is generally affected first, and if antisyphilitic treatment be not adopted, the other is afterwards attacked.

The diagnostic symptoms of iritis already given are all strongly marked in this species. The sclerotic wreath of inflammation is strongly marked, and is of a brownish red or cinnamon color; but there is one sympton often wanting in the others, which in this exists to a degree almost diagnostic of the affection at first sight—I mean small pustules (condylomata) on the anterior surface of the iris. The annulus minor, or pupillary border, is the chief seat of these; they may be one or two in number, or they may encircle the whole pupil, project into it, and in a manner block it up. They vary in size from that of a pin's head to a split pea, in some instances approaching and even touching the cornea. At first they are

of a brownish red or chocolate color, but as they advance in size they whiten or become yellow at their apices, burst, and sometimes throw out pus into the anterior chamber, forming hypopion. Besides the changes in the pupil already mentioned, it is dragged upwards and inwards in the direction of the root of the nose. It need not be wondered at, if in this state red vessels are seen crossing the iris, and if in other parts it appears as if speckled with blood spots.

There is reason to think that condylomata sometimes form on the posterior surface of the iris, pushing it forwards, and sometimes even forcing a passage between its radiated fibres into the anterior chamber. This appearance is, at all events, occasionally met with, and is caused either by a condyloma or an accumulation of puriform lpmph in the posterior chamber, from which it must get an exit either through the iris into the anterior chamber, or through the tunics of the eye posterior to the iris.

When syphilitic iritis is severe, the cornea, as in the other species, loses its lustre. It assumes the appearance of the surface of a mirror on which the breath has been blown, which is often one of the earliest indications of inflammation of the cornea. In still more severe degrees of the disease, even red vessels may be seen in its substance.

The pain in the eyebrow and head in this species, like other syphilitic pains, is more strictly nocturnal than in the other species, and is sometimes very agonizing. I have already remarked that particularly in the early stages of iritis, the pupil is in some rare cases rather enlarged than contracted. I have noticed this more frequently in the venereal than in any other species, the pupil in some instances being as large as in common amaurosis, the centre remaining black, and the circumference surrounded by a string of condylomata. In these cases, though part of the pupil is pretty clear, the patient sees almost nothing, proving that the retina is materially affected, probably by deposition in its tissue, or on its surface. I have seen patients who were insensible to light in this state, and yet completely recovered by the use of mercury. I have seen the auditory nerve affected simultaneously with the retina by lues, and simultaneously cured by mercury. The terminations of this species, are generally what have been described in the third degree, provided the disease is not counteracted by suitable treatment, though I have seen pseudo-syphilitic iritis terminate without any considerable destruction of the eye, in cases where the patients, ignorant of the real nature of their disease, had not been treated by mercury. In the great majority, however, of cases of venereal iritis, unless the constitutional cause be overcome by mercury, the disease will end in closure of the pupil, obliteration of the anterior and posterior chambers, and perhaps even in suppuration and general sinking of the eyeball.

It cannot be expected that the exact mode of managing mercury in these cases should be treated of here. It must be given as for any other constitutional lues, and the course conducted in a steady manner, and in a more or less severe degree according to the state

of the symptoms, avoiding, if possible, the unnecessary misery of violent ptyalism. It is often, of course, necessary to continue the mercury long after the cessation of the iritis, in order to secure the constitution. As before stated, besides the internal exhibition of mercury, mercurial ointment in combination with opium, may be rubbed in the supraorbital region. It is also necessary to exhibit opium internally, in order to alleviate the violent dolores osteocopi.

Judging from my own experience, I differ decidedly in opinion from those who put their whole faith in mercury for the cure of this species, to the exclusion of the other remedies, such as bleeding, blistering, &c. In my own practice, I have seen the disease running on with rapid strides to dangerous hypopion, notwithstanding the full action of mercury, and its further progress at once arrested by a full bleeding from the arm and a blister on the hind-head. Local bleeding will, however, be more generally required than venesection, for the constitution is often much broken down in such cases, by previous courses of mercury, venereal hectic, &c. When the inflammatory symptoms are fairly on the decline, the vinum opii will be serviceable here as in the other species; and the belladonna may be applied throughout the disease, and continued for months after the inflammation is gone, provided there be any hope of the pupil dilating and the vision returning.

This species leaves the eye more tender and subject to relapses than any other. For months, or even years, after a violent, protracted, or ill treated attack, the sclerotic circle of inflammation may be excited by exposure to cold, or even by sudden changes of weather; and for the same reason, the formation of an artificial pupil, when this has been required from previous venereal iritis, is generally followed by such a degree of inflammation as to frustrate our efforts to restore vision.

It was my intention to have now proceeded to the consideration of the scrofulous and arthritic species. Of the former I have seen no description in books, though it is a disease I have frequently met with. The latter, again, is a disease much talked of in the German schools, but of which I have seen few well marked cases. As this essay, however, has already exceeded in length the generality of those read to this society, I must for the present relinquish the subject of iritis.—*Glasgow Medical Journal.*

Case in which the operation of Lithotritie was successfully performed by Robert Liston, Esq., one of the Surgeons of the Royal Infirmary of Edinburgh, Lecturer on Surgery, &c.

Andrew Leechman, aged seventy, was admitted into the Royal Infirmary on the 10th November, 1828. He stated that for five months past he had been laboring under all the symptoms of stone in the bladder. On sounding him, a stone was distinctly felt. As he had a great aversion to being cut, and as his urine seemed to indicate a diseased state of the bladder, it was thought advisable to break down the stone, in preference to the usual operation.

On the 13th November, a solution of opium having been injected

into the bladder, Mr. Liston introduced Civiale's instrument, but, owing to the restlessness of the patient, and the irritable state of the bladder, did not succeed in grasping it completely. Several small portions of stone, however, came away in the fangs of the instrument, and during the night. He suffered no inconvenience from the operation.

On the 15th, he passed a barleycorn incrusted with calcareous matter. On the 16th, a piece of straw with the same incrustation. He complained of pain in the testicles. On the 18th, a small abscess having formed in the scrotum, it was opened.

The instrument was again introduced on the 25th. The stone was fairly laid hold of, but was so soft that it was crushed by the instrument; on withdrawing which several fragments of seeds were found adhering. He now confessed that while reaping during the last harvest, he had introduced a number of barleycorns into his urethra, but would not say for what purpose.

The patient had repeated attacks of retention of urine after the last operation, from the larger portions of stone lodging in the urethra. He passed in all thirteen fragments, having entire barleycorns for their nucleus, besides a much greater number, having only small pieces of the beards. He had now little pain, and the quantity of mucus in his urine was inconsiderable. He was sounded several times, and as nothing was felt in his bladder, he was dismissed cured on the 16th December, 1828.—*Edin. Med. Jour.*

Spontaneous Cure of Femoral Aneurism, aided by Pressure.—John Leavy, aged forty-five, laborer, was admitted into Winchester County Hospital with a large femoral aneurism of the left extremity. He had been in the hospital two years previously, under Mr. Lyford, at which period he underwent the operation of having the right crural artery secured for a popliteal aneurism. The patient's account of his present affliction is as follows: In June last, while in the act of mowing, he felt something give way, or (as he expressed himself) snap in his thigh, which was productive of such excessive pain as to entirely prevent him proceeding with his employment. From this time a pulsation or throbbing commenced, which became so much aggravated at night as to deprive him of sleep. A very short time elapsed before a small tumor became distinct at the place where he felt the pulsation, at the lower anterior and internal part of the thigh, which has gradually increased to its present enormous size, being four or five inches in circumference; circumscribed rather than hard, and can be almost entirely reduced by pressure on the artery above. The whole extremity much enfeebled, and he is quite incapacitated from moving without a stick or crutch. As he was desirous of making some domestic arrangements prior to his coming into the house, he became an out patient. He was requested to make moderate pressure on the part by means of a flannel roller, and to keep himself at home perfectly quiet.

September 27.—He was made an in patient. On examining the thigh, the tumor was found to have greatly subsided, and to have lost all pulsation, which, according to his statement, had taken

place three days previously. He had experienced a most decided diminution of pain from the pressure of the bandage, which he therefore increased from time to time by tying a handkerchief very tight around the thigh, the knot of which was directly over the centre of the aneurism. Since the pulsations have ceased, he has felt exactly similar sensations to those with which he was troubled after the operation on the opposite limb. He now complains most severely of a burning heat immediately under the skin, which he compares to boiling water trickling down his foot and leg. May not this disordered feeling be connected or depend on the circulation of the parts below the aneurism being carried on by the more superficial vessels?

The pressure has been reapplied by means of a tourniquet and splint. The temperature of both feet exactly correspond.

October 8.—On removing the apparatus by which the pressure had been applied, all appearance of swelling had entirely vanished, and every vestige of disease removed. The knee joint is now capable of the most perfect flexion and extension, and the patient enabled to walk without any support, and without inconvenience. He was therefore discharged cured.—*Provincial Gazette.*

---

*Successful Removal of a portion of Diseased Bone from the Os Calcis.**—John Alison, æt. 21, admitted to the Edinburgh Infirmary on the 27th October, "states, that nine years ago he sprained his left ankle. There have been at different times sores formed, which healed up without any bone being discharged. Ten weeks ago received a slight injury, when it again swelled, and several abscesses formed and burst; one small piece of bone was discharged. There are three sores situated on the outer, and the same number on the internal malleolus. On probing the sores on the outer side, the os calcis is found carious, and the probe appears to enter the joint. The bones opposite intersected on all sides by sinuses. Health and appetite good at present. Motion of the joint not impaired."

On the 3d of November, "a considerable portion of the os calcis was removed by Mr. Liston, and the cavity stuffed with lint."

Very little pain or swelling succeeded to the operation; a poultice was applied over the dressings. On the 13th, a seton was drawn through the diseased part of the foot, and on the 4th of December it was reported that "no dead piece of bone can now be felt; granulations healthy; general health good."

About the beginning of January the sores were nearly all healed. Some soft swelling remained about the ankle, the motions of which were perfect. It was done up with plaster and bandage, in the manner recommended by Mr. Scott, of the London Hospital, and the patient dismissed.—*London Medical Gazette.*

---

* From Dr. Ballingall's Clinical Lectures. This will account for the intermixture of narrative and comment.—E. G.

Removal of a large portion of the Head of the Os Calcis.—Alexander Beveridge, æt. 15, admitted on the 25th of November, "states that 18 months ago, a swelling began to form over the left os calcis on the inner side. This broke, and discharged a quantity of matter. Two small pieces of bone have been discharged. There is a fistulous opening below the malleolus, leading down to the bone, which is bare; the motions of the joint are perfect; health good."

On the 28th it is reported that "a large portion of dead bone was removed yesterday by Mr. Liston, with the assistance of the trepan; slept badly; some headache; pulse 180; skin rather hot; tongue clean; bowels open; no swelling of limb."

On the 2d of December "dressings were removed; sore looking well; health good."

From this time forward I find nothing of any importance noted in the journal; the patient's health continued good under the use of animal food and porter, the sore granulated kindly, and on the 14th of January he was dismissed cured.

These cases, gentlemen, I have been induced to bring to your recollection, because, although they offer nothing very striking in the detail, they are well calculated, in my opinion, to encourage a more successful practice in a class of cases which have frequently been (if I may use the expression) slurred over, and have too often been allowed to go on from bad to worse, until the patient's life has been brought into hazard, and has, perhaps, been ultimately saved only at the expense of his limb.—*London Medical Gazette.*

MIDWIFERY.

Case of Cæsarean Operation, in which both the Mother and Child were saved.—The operator in the following interesting case was Dr. Müller, physician at Löwenberg in Silesia. He was called in July, 1822, to visit a woman who had been two days in labor, and whom he found it impossible to deliver on account of deformity of the pelvis. She was 33 years old, only three feet tall, deformed in many respects, the legs and arms being disproportionately short, the forearms, thighs, and shins somewhat crooked, the pelvis flat from before backwards, the chest well constructed. The gravid uterus projected very much. The whole body, when he first saw her, was bathed in perspiration, and she complained less of labor pains, than of insupportable and continual rending in the lower pelvis. The pulse was very frequent and small; and the waters had been discharged for four and twenty hours. On examining *per vaginum* it appeared that the superior outlet of the pelvis was of the form of a fissure, the length of which, from the union of the *os ilium* and *os pubis* of one side to the other, was *four* inches, and the breadth at each end between $1\frac{1}{2}$ and $1\frac{2}{3}$ *inch*, at the middle between the prominence of the *sacrum* and *symphisis pubis* not above *two inches and a sixth.* The prominence of the *sacrum* gave the outlet the form of a heart posteriorly, and the shape of the an-

terior margin corresponded with that of the posterior. The *os uteri* had disappeared as usual, and was close upon the upper outlet of the pelvis. The soft integuments of the child's head were pressed as far forward as the outlet would admit of, but the head was not wedged in. The integuments were elastic, and the mother declared that she felt the movements of the child.

"Natural delivery was manifestly out of the question; and destruction of the child's head, although practicable, was fraught with danger to the mother, and besides could not be immediately resorted to, because the child was alive. Yet there was no time to be lost, as the woman's strength was greatly exhausted, and farther delay exposed her to the risk of speedy death. The cæsarean operation, then, appeared to be the only resource of art that remained." The patient readily gave her consent; and Dr. Muller, after the preparative evacuation of the bowels and bladder, proceeded to perform it in the following manner: At the first incision he cut through the integuments down to the tendinous expansion of the *linea alba*, beginning an inch below the navel, and ending an inch above the *symphysis pubis*. A small aperture was next made into the abdomen near the navel, the fore and middle fingers of the left hand were introduced into it, and the scalpel being then passed between them, the fingers and instrument were carried downwards till the requisite opening was completed. This was nine inches in length. The uterus now pressed forcibly forward, and many large vessels could be seen under its glistening surface. A part of the uterus was pinched up, and an incision, as long as that in the integuments would allow, was made through its parietes, where they were most free of vessels. Very little hemorrhage followed the wound, and care was taken to sponge all the blood away so long as it continued to flow. As soon as the incision was completed, the child pressed outwards, with its feet on the operator's left hand, and was immediately removed without difficulty. It was alive, healthy, vigorous, and weighed 7½ pounds. The navel string was secured in the usual way, and the placenta, soon afterwards, was removed by introducing the hand previously cooled in water. During this part of the operation, pressure was made upon the abdomen, to prevent the entrance of air into the cavity. The wound was now united by adhesive straps, and covered with charpie; a fustian belt was then put on and tightened. At the lower angle of the wound, an opening, an inch in length, was left without straps for the discharge to flow through. Meanwhile, the uterus was felt contracting in the usual manner, and formed a ball in the left flank.

A good deal of blood issued from the vagina after the removal of the placenta, and again after the dressing of the wound was completed. The patient was directed to remain in the supine posture, and care was taken to make every arrangement before the operation to ensure perfect quiet for some time after it. In the evening there was some fever, but no pain; and during the night she slept none. Next day the fever had increased, the pulse was very frequent, the thirst inextinguishable, the pain of the lower belly severe and constant, and she had snatches of sleep disturbed by startings;

but during the night she slept well. During the third day the fever and pain were moderate, the abdomen a little swelled; in the evening the fever increased; at night she had little sleep. On the morning of the fourth the fever was again moderate. The wound, which had suppurated, was dressed. In the evening the usual febrile exacerbation occurred, with increased swelling, but little pain. The straps having become loose, they were carefully removed, and fresh ones applied. The edges of the wound were hot, swollen, and florid. The secretion of milk had commenced. At night the patient slept well. On the morning of the fifth there was no fever, but it returned violently at midday, with smarting of the wound, and increased swelling of the abdomen. The fever moderated, however, in the evening, the lochia began to flow, and the patient again slept well. On the sixth the abdomen was greatly swollen, the purulent discharge great, the pain considerable, the lochia more abundant. In the evening her appetite improved, and soup was allowed. The dressings were changed. On the seventh there was little or no fever, her appetite was good, the pain and swelling had abated, and the lochia were more abundant. The wound was dressed, and it was found that two inches of it next the umbilicus had healed. From this time the suppuration continued so profuse for some days, that frequent dressings were required daily. The abdomen progressively diminished in size; the fever was inconsiderable; the appetite strong. On the eleventh tonics were administered, the treatment having previously been confined to the occasional administration of a clyster. On the twelfth the milk receded, and the pus had become less abundant, and of firmer consistence. On the sixteenth day there was not above an inch of the wound open; the pus was healthy and moderate in quantity; and the patient was able to sit up a little in bed. On the twenty-second she was allowed to leave her bed for a short interval; but her debility was very great. For another week she continued to improve; but for a few days after that, in consequence of her having removed to an uncomfortable lodging, and been restricted to an insufficient diet, the wound, which had nearly healed, became inflamed, and a black, fetid, tough, slimy fluid, was discharged from the belly. A change of quarters and diet, together with the use of cinchona, restored her former favorable state of progress; and on the forty-third day the wound was completely closed. Some weeks afterwards the surface broke out again, but in no long time it was finally healed up; and four years after the operation, Dr. Müller saw her in good health, which she said had not suffered any interruption after the healing of the wound. The child died of convulsions when three months and a few days old.—*Magazin. fur die gesammte Heilkunde*, 1828, *xxviii. i.* 146.

Puerperal Fever.—Dr. Cusack, of Dublin, has published some interesting observations on the diseases termed Puerperal Fever. He conceives that there are three species of this affection. 1. One of a decided phlogistic character, having its seat in the peritonæum, and exhibiting the specific marks of acute inflammation of serous

membranes. 2. Inflammation of a low character, confined, for the most part, to the subserous and pelvic cellular tissue, accompanied with great prostration of strength, and fever of the lowest typhoid type. 3. Inflammation of a character intermediate between the two above mentioned, in some particulars resembling, and in others differing from both.

The *first species* is met with among patients of sound constitution, whose labors have not been of a description calculated to injure the vital powers. It may arise from exposure to cold, the use of improper food, &c., and its essential symptoms are, in the commencement, violent continuous pain, and exquisite tenderness of the belly, with constipation, hard incompressible pulse, and laborious respiration, caused by the efforts of the patient to prevent the action of the diaphragm on the inflamed peritonæum. In its advanced stage, there is rapid feeble intermitting pulse, regurgitation of the contents of the stomach, and tympanitis; occasionally, the pain in the belly ceases, and the patient complains only of a violent pain among the ribs, and respires like a person laboring under acute pleurisy. On laying open the abdomen after death, a considerable quantity of inodorous gas usually escapes, and an effusion of whey colored serum mixed with flakes, or large soft masses of lymph, is found. The intestines are coated and agglutinated to one another with lymph, and this appearance, although often diffused over the peritonæal investment of the whole of the abdominal viscera, is usually most conspicuous in the vicinity of the uterus. The cellular tissue of the lungs, the bronchial tubes, and sometimes the cavity of the pleura, contain serum, and occasionally, a coating of lymph is observed on the pleura.

The *second species* occurs principally in seasons which give rise to typhus fever, erysipelas, and other diseases of a low type, and in women, who previous to, or during delivery, have suffered from bad health, loss of blood, or moral circumstances of a depressing nature. In this species, pain is not necessarily present; in some of the most fatal instances it is even totally absent, except at the commencement, or, should the disease be of longer duration, towards its termination, and frequently, it is only by means of a very careful examination, and by making pressure with considerable force, that any abdominal tenderness can be detected. The pulse is characterized by excessive weakness and compressibility, the slightest pressure of the finger on the artery being sufficient to prevent the pulsation being felt at all; and so remarkably is this the case, that one of the most certain indications of the patient's improvement is the accession of some degree of strength to the pulse, along with an increase of resistance on pressure. The patient usually complains of extreme weakness, exhaustion, and want of rest, and occasionally in the most urgent manner begs for nutriment. The countenance is indicative of exhaustion and anxiety, rather than pain; the bowels are loaded, and their secretions vitiated. The tongue sometimes is white, at others its color is natural; occasionally it is of a bluish whiteness, as of cream spread over a dark ground, or, it is of a deep purple shade, as if painted with ink. In such cases the

tongue is not at all coated or loaded, but the color appears to be seated in its papillæ, and when the disease manifests signs of amendment, a thick brown crust, like that observable in common fever, forms on the tongue. The temperature of the body is in general below the natural standard; in the progress of the disease there are irregular rigors, and towards its fatal termination the skin is sometimes covered with large purple spots. On dissection, the intestines and peritonæum are destitute of vascularity or traces of lymph, and the quantity of serum effused is small, of a dark aqueous or oily purulent appearance and resembling in some degree stale beer, but the peculiar and remarkable seat of disease is the cellular tissue uniting the peritonæum to the parietes and contents of the abdomen and pelvis. Two kinds of effusion are met with in those textures, one a reddish serum, occasionally so copious as to pervade not only the cellular tissue about the uterus, the pelvic cavity and the iliac regions, but even sometimes to distend the cells of the delicate cellular tissue, which connect together the two layers of the messentery. The other species of effusion is not of so fluid a nature, resembling jelly in appearance and consistence. This also occupies the cellular tissue, and is most conspicuous where the looseness of the peritonæum admits of freer effusion, as in the broad ligaments of the uterus. The uterus itself is softened and flabby, and dark colored softened patches are often observable on the intestines. The ovaries are sometimes enlarged to the size of a large apple, and converted into a soft mass of the consistence of coagulated blood. The thorax is also the seat of effusion, but presents no trace of lymph. Should blood have been taken from a person laboring under this affection, it does not exhibit the buffy coat, but forms a soft coagulum, broken up by the slightest violence.

The *third form* of the disease resembles the first, in being characterized by violent abdominal pain, tenderness, increased temperature, and the absence of weakness and collapse. It differs from each form, in the pulse neither possessing the hardness and incompressibility peculiar to the first, nor sinking into the weakness and softness of the second. Neither is its pathology characteristic. In some instances, there is the same copious effusion of serum and lymph as in the first species, and in others, a combination of the morbid phenomena of both forms has been observed.

In the treatment of the inflammatory form, the antiphlogistic regimen should of course be adopted in its fullest extent, and the constitution brought likewise under the influence of mercury. In using the lancet, the principle to be observed is to produce, with the loss of a moderate quantity of blood, an immediate and decided effect. In accomplishing this object, the peculiar condition of puerperal females demands some important modifications. The relaxed state of the abdominal parietes, and the removal of the pressure of the uterine tumor, in such cases, facilitates so much the occurrence of syncope in the erect position, that the practice of making the patient sit up during the abstraction of blood, is calculated to lead to mistakes of a very injurious tendency; and the plan which Dr. C. adopts, is that of opening the vein by a large orifice,

while the patient is in the recumbent posture. If she is strong and plethoric, he continues to abstract blood without altering her position, till a decided effect has been produced; and if, on the other hand, he is apprehensive of the patient's bearing the loss of blood badly, as soon as the quantity deemed sufficient is abstracted, he directs a change of posture from the horizontal to the upright, and thus induces syncope, without the chance of being, by its occurrence, prevented from abstracting the necessary quantity of blood.

In the second species of this disease, the employment of the lancet at any stage, or even of leeches, in most cases, only accelerates its fatal termination. Should the patient occupy an ill ventilated residence, measures should be taken for her removal, or to allow a free ingress of pure air. The bowels should be unloaded, and such medicine should be selected for this purpose, as, while it unloads the intestinal canal, will impart a healthy action to its mucous coat, and have the effect rather of exciting than of depressing the general system. With this view, from five to ten grains of calomel, followed in the course of two hours by a draught composed of about one drachm of oil of turpentine, the same quantity of cinnamon water, and a drachm of syrup of ginger, should be given. This draught may be repeated every two hours till the bowels are sufficiently evacuated. To remove the watchfulness which so materially aggravates the debility, two grains of opium, combined, when the debility is great, with camphor or ammonia, may be given. A liberal quantity of diluted wine should be allowed, flavored with cinnamon, or mixed with whey, or arrow root gruel; and chicken broth, carefully deprived of its fat, and taken in small quantities, may form a part of the patient's drink. The only admissible direct means of subduing this low species of inflammation, are blisters and mercurials. The excessive irritation which blisters sometimes produce, should be carefully prevented, and the depletory tendency of the mercurials guarded by opium.

In the treatment of the third species, while general bloodletting is to be considered inadmissible, from two to three dozen of leeches should, in every case, be applied to the abdomen, and their use repeated, or a blister applied, as circumstances indicate. The bowels should be opened by the means recommended under the second form, and the mercurial treatment afterwards adopted, while the dietetic treatment should be of the most decidedly antiphlogistic description. To be successful, however, our remedies should always be adapted to the exigencies of the disease; and although we commence the treatment of a case under the firm convictions of its requiring the management suited to one particular form, we should not be the less ready, on the disease assuming another type, to substitute that kind of treatment applicable to a species altogether opposite.

Dr. C. is of opinion that the low form of inflammation which obtains in the second species of this disease, if not the same, is at least a modification of that known by the term "diffuse cellular inflammation."—*Edinburgh Med. and Surg. Journal.*

CHEMISTRY.

Glucinum Yttrium.—In the 6th volume of this Journal, (p. 616,) we announced the discovery, by M. Oersted, of the metallic basis of alumina, whose existence was previously only hypothetical. Since that time the two remaining earths, glucina and yttria, have been proved to be metallic oxides by M. Wöhler. The processes employed were similar to those which led to the discovery of aluminum. The following account of these, together with the descriptions of the metals, is from Brande's Journal, vol. 5, p. 195, for which the Ann. de Chimie is quoted. L. C. B.

Glucinum.—The glucina was prepared from beryl, and being mixed with charcoal and heated in a tube, chlorine was passed over it and chloride formed; this was obtained both in white acicular crystals and in a fused mass, and was very deliquescent. The chloride was placed in layers in a platinum crucible, with intervening layers of flattened potassium, the cover fixed on with a wire and the crucible heated in a spirit lamp. At the moment of reduction, the crucible became quite hot; when cold, it was opened and turned upside down into a large glass containing water, which dissolved out chloride of potassium and glucinum, and left the metal glucinum as a grayish black powder, which was then separated on a filter, washed, and dried.

In this state glucinum has the appearance of a finely divided metal, and when burnished acquires a dull, metallic lustre. It presents no appearance of fusion. It is not oxidized either in air or water at temperatures below 212° Fahr. Ignited on platina foil it burns brightly into glucina. In oxygen gas the combustion is very vivid, but still no signs of fusion. It dissolves when heated in the nitric, sulphuric, or muriatic acid, or in solution of potash. It burns when heated in chlorine, bromine, or iodine vapor, forming volatile chloride, bromide, or iodine. It also combines easily with sulphur, selenium, phosphorus, and arsenic.

Yttrium.—The yttria was obtained from gadolinite, and converted into a chloride by charcoal, chlorine, and heat, as before. The chloride is volatile, and resembles the similar compound of glucinum. It was found exceedingly difficult to obtain the yttria pure; and while forming the chloride, generally a little sulphur and potassium appeared in one or other part of the operation.

The chloride was decomposed by potassium in a crucible, as before, with vivid incandescence; and dissolving the result in water, the yttrium was obtained in small scales having a perfect metallic lustre and gray black color. It is easily distinguished from glucinum and aluminum by its metallic and crystalline appearance. When burnished it acquires a perfect lustre, but its color and metallic appearance do not equal those of aluminum—one is to the other, perhaps, as iron to tin. Aluminum appears to be a ductile metal; yttrium, on the contrary, brittle. Yttrium does not become oxidized by air or water at ordinary temperatures. Heated to redness in the air it burns into yttria; in oxygen it burns vividly, and

then gives traces of fusion. It dissolves in sulphuric acid and in solution of potassa. It burns in the vapor of sulphur, producing a sulphuret. It forms a seleniuret and a phosphuret.

From these and former experiments it results, that the bases of alumina, glucina, and yttria are metals which, at ordinary temperatures, do not act upon air or water, but decompose water when acids or alkalies are present, and burn vividly in oxygen, chlorine, iodine, bromine, sulphur, selenium, and phosphorus.

Method of detecting Arsenic in Sulphur.—MM. Gieger and Reimann say, that the presence of arsenic in sulphur, to the amount only of 0.000061, may be discovered in the following manner. A certain quantity of precipitated sulphur, flowers of sulphur, or ordinary sulphur finely pulverized, is to be digested with ammonia for a considerable time, then filtered, and afterwards the clear liquid acted upon by excess of muriatic acid. If a yellow precipitate occurs, it is an indication of the presence of arsenic; if not, the liquid is to be evaporated until only a few drops remain. A little ammonia is then to be added; afterwards a small quantity of muriatic acid; and finally a little solution of sulphuretted hydrogen. If there be the smallest quantity of arsenic, it will be rendered evident by a yellow precipitate.—*Brande's Journal*, N. S. vol. 5, p. 192.

Peculiar Production of Ammonia.—M. Hollunder mixed liver of sulphur (sulphuret of potassium) and pure iron filings together, put them into a covered crucible, and exposed them to a high temperature. When the double sulphuret thus obtained was moistened with a little water, it disengaged abundant vapors of ammonia, and continued to do so as long as it continued hot.—*Ibid*, p. 189.

The fact above stated, at first sight, appears difficult of explanation. But it can be accounted for by the great affinity which the above compound, when moistened, has for oxygen; this causes the decomposition of the air and water, the oxygen of the former and latter combining with the potassium and iron, and the remaining hydrogen and nitrogen forming ammonia. A portion of sulphuretted hydrogen is probably also formed at the same time. L. C. B.

Sanguinarine.—A notice of this new vegetable alkali, discovered and described by the late lamented professor Dana, more than two years since, has at length reached the English journals through Hensman's Repertoire de Chemie. These journalists do not appear to have been aware that this discovery was made in this country, and by an American chemist, and that a detailed account of it, together with the processes by which it is obtained, was published in our journals in 1827. L. C. B.

Chemical Action of Light.—The following are some effects quoted by M. Fischer, as proper to be added to those which demonstrate the chemical action of light upon inorganic matter. If a solution of ferro-cyanate of potash be precipitated by alcohol, the pre-

cipitate collected and rapidly dissolved in water, and the solution exposed to light, the yellow color soon passes to green and ultimately Prussian blue is deposited. The solution at the same time becomes alkaline; and if the experiment be made in a close vessel, the odor of hydrocyanic acid may be observed when the liquid is examined. The salt, in fact, is in part decomposed by the action. Prussian blue, sometimes with excess of oxide of iron, is formed and deposited, and a hydrocyanate of potash left in solution. The same changes take place with the ordinary solution of the ferrocyanate, but more slowly. They do not take place without light.

The same salt crystallizes in large quadrangular plates in an obscure situation; but in bright light it gradually loses the power of yielding this form, and becomes dendritical and pulverulent.

The action of light upon solutions of gold and silver is very much increased by the presence of organic matters, as gum, starch, sugar, alcohol, &c. This effect, however, has been long known, and sometimes rendered available in experiments made upon the solar rays.—*Brande's Journal*, N. S. vol. 5, p. 188.

Efficacy of Ammonia in Counteracting Poison.—In the April number of Silliman's Journal, Dr. Austin Church, of Cooperstown, N. Y., states the following cases of the efficacy of ammonia in counteracting the poisonous effects of the stings of bees, insects, &c.

"A young man in this place had accidentally overset a hive of bees, and before he could escape, they had settled in great numbers on different parts of his body and limbs, and stung him severely. It was about half an hour after the accident happened when he came to my office in great agony, and he had scarcely time to give an account of it before he fainted. I immediately applied the ammonia to the parts that had been stung, his legs, arms, and breast. He directly recovered from his faintness, and experienced no pain or other inconvenience afterwards.

"It is several years since I first used the aqua ammonia, to counteract the effect of the bites of insects and stings of bees, and it has invariably produced instant relief—generally complete. I have often seen children crying in excessive pain from the sting of a bee, and on the application of the ammonia they would immediately cease complaining and become cheerful, so complete and sudden is the relief it produces. I always use it for musquito bites, and they never trouble me farther."

Action of Sulphuretted Hydrogen Gas on Solutions of Mercury. By M. Rose.—The precipitate obtained by the action of sulphuretted hydrogen on a solution of chloride of mercury remains long suspended in the liquid, to which it imparts a milky appearance; it is very difficult to filter, it dries readily, and then much resembles white precipitate of mercury. At a high temperature it is decomposed; if it be slowly heated in a glass tube closed at one end, chloride of mercury first sublimes, and afterwards sulphuret of mercury. This compound perfectly resists the action even of con-

centrated acids; it is only by heating it in nitric acid, and then adding muriatic, that sufficient action is exerted to convert all the sulphur into sulphuric acid.

When this compound is treated with chlorine gas and heat, chloride of sulphur is at first disengaged, and afterwards sublimate. The alkalies and their carbonates blacken it, especially with the assistance of heat: as the results of this decomposition, the liquid contains chloride of potassium and sodium, and the black precipitate consists of a mixture of oxide and sulphuret of mercury; there is no chloride of mercury, as has been supposed. The different analyses which I have made having given results almost identical with the data of calculation, this compound is formed of one atom of chloride of mercury = 36.8, and two atoms of sulphuret of mercury = 63.20. Thus, by the action of sulphuretted hydrogen on a solution of sublimate, there is first obtained sulphuret of mercury, which, combining with the undecomposed chloride, forms a substance insoluble in water. If the quantity of sulphuretted hydrogen be too great, all the chloride is decomposed, and all the precipitate is sulphuret of mercury.

Analogous phænomena are observed when a solution of bromide of mercury is similarly treated. The solution becomes milky; the dried precipitate resembles the former, except in being slightly yellow; it acts in the same way with the concentrated acids; the alkalies blacken it, but not so strongly: it is decomposed by heat into bromide of mercury and sulphuret of mercury. The composition of this body is analogous to the preceding; that is to say, it is formed of an atom of bromide of mercury, and two atoms of sulphuret of the same metal.

The iodide and fluoride of mercury, treated with sulphuretted hydrogen, furnish precipitates, the combination of which is absolutely analogous. The precipitate of the latter is white and heavy, and is distinguished from the others by being decomposed by boiling water, into fluoride and black sulphuret of mercury; when heated in a glass tube, one end of which is closed, it is resolved into fluosilicic gas and mercury; while at the point of the greatest heat sulphuret of mercury sublimes.

This precipitate is decomposed by concentrated sulphuric acid when heated (which does not occur with the others.) Treated simply with the alkalies, it becomes red; on the contrary, it becomes black when boiled with these bodies.

The mercurial oxisalts act with sulphuretted hydrogen in the same manner as the combination of this metal with bromine, chlorine, and fluorine. The precipitates which are obtained at first are white, and more readily deposited; they are also more easily filtered; they are composed of sulphuret of mercury, and a small quantity of the salt employed. Thus the precipitate obtained with nitrate of mercury is white; when heated in a glass tube, it yields a small quantity of sulphuret of mercury, which sublimes, much metallic mercury, nitrous vapors, and sulphuric acid; it acts with acids in the same manner as the precipitate furnished by the chloride; the alkalies give it first a yellow color, and finish by render-

ing it black; when heated to ebullition, it blackens immediately. It is formed of two atoms of sulphuret of mercury, and one atom of anhydrous neutral nitrate of mercury. The solution of cyanide of mercury is an exception to the general rule: in this, the smallest quantity of sulphuretted hydrogen occasions the formation of black sulphuret of mercury.—*Hensman's Repertoire*, Nov., 1928.

Discovery of the Mode of Making the Diamond.—At a meeting of the Academy of Sciences, on November 3d, M. Ganal stated that he employed phosphorus for the purpose of decomposing the carburet of sulphur, by which the carbon was set at liberty under the form of small crystals, having all the properties of the diamond, and possessing the power of cutting or scratching the hardest bodies. If sticks of phosphorus are introduced into a matrass containing carburet of sulphur, covered with a layer of water, as soon as the phosphorus comes in contact with the carburet, it dissolves as it would in water of 140° or 158° of Fahrenheit, and is precipitated to the bottom of the vessel. The mass then consists of three distinct layers: the upper part of pure water, the second of carburet of sulphur, the third of liquified phosphorus. If the liquor is agitated while in this state, so as to mix the different substances, it becomes milky and turbid, and after remaining some time still, it separates anew, but apparently into two layers. The upper is formed by pure water, and the lower by phosphuret of sulphur. Between these layers is a very thin one of white powder, and which, when the matrass is held towards the rays of the sun, produces all the effects of a prism, and, consequently, seems to be formed by minute crystals.

The author, encouraged by this experiment, endeavored to obtain more voluminous crystals, which he succeeded in doing by means of the following process: He introduced into a matrass, which was perfectly still, first eight ounces of water, then eight ounces both of carburet of sulphur and of phosphorus. As in the preceding experiment, the phosphorus first dissolved, and the three liquids took their stations in the vessel according to their specific gravities. After twenty-four hours, a very thin pellicle, consisting of a white powder intermixed with air bubbles and different centres of crystallization, was formed. After some days, these pellicles gradually increased in thickness. The separation of the two lower liquids became less distinct, and after three months they seemed but one substance. The experiment having been left in action for another month, it became necessary to discover the mode of separating the crystallized substance from the phosphuret of sulphur, which was difficult on account of the inflammable nature of the substance. After various trials, more or less successful, the author determined to filter the whole through chamois leather, which he placed under a glass bell, renewing the air from time to time. At the end of a month the skin was washed and dried, when M. Ganal was enabled to examine the crystallized substance which remained on its surface. Exposed to the rays of the sun, it presented numerous crystals, reflecting all the colors of the rainbow: twenty among

them were large enough to be raised with the point of the knife; three others were as large as a millet seed. The latter were submitted to the inspection of M. Champigny, director of the jewellery workshops of M. Petelot, and they appeared to him to be real diamonds. M. Gay Lusac stated, that, to his knowledge, M. Ganal had been occupied in the same research for a period of eight years.

Five years since, in the month of January, 1824, M. Delatour deposited with the French Academy of Sciences a paper, whose contents were then unknown, but have since proved to relate to the manufacture of the diamond, and contain, we presume, the results of the first essays of this gentleman. The method is still a secret, and said to be essentially different from that of M. Ganal just described.

On the 11th of November, glass tubes were exhibited to the Academy, filled with diamond dust, or, (to speak more accurately,) carbon crystallized by art. The different specimens were not obtained by the same method. The chemical properties are the same, but in appearance and hardness they are strikingly different.

One of the tubes contains a very transparent small crystal, whose form is distinctly pyramidal. M. Delatour expects to present to the Academy crystals of four or five lines in diameter.

M. Arrago remarked on this occasion, that it would be easy to ascertain the nature of one of the crystals, as its "facettes" were sufficiently large to show the angle of prolongation. He stated, also, that a person of his acquaintance entertained a hope that the decomposition of carburet of sulphur by the voltaic pile would be successful. The defective conductibility of this substance had hitherto impeded the success of the experiment, but it is confidently expected that this difficulty will be overcome.—*London Medical and Physical Journal, Feb.*, 1829.

Nitrate of Silver as a Test for Vegetable and Animal Matter.—Dr. Davy states that nitrate of silver, dissolved in pure water, is not altered by the sun's rays. If the minutest quantity of vegetable or animal matter is present, the solution is discolored; and with common distilled water, the discoloration is strong. To prove that the cause of the change of color is the one assigned, it is sufficient to allow the colored matter to subside, decant the colorless solution, and expose it again to sunshine. However powerful the sun's rays are, no further effect is produced; but, add more common distilled water, and the phenomenon will instantly reappear. He believes nitrate of silver, thus used, is one of the best tests of the presence in water of very minute portions of vegetable matter: of course, any chloride of silver that may be formed in consequence of the presence of any muriates should be allowed to subside in the dark, and the subsidence should be complete before the fluid is decanted and exposed to light.—*Jameson's Journal.*

On the Presence of Iron in Tin.—From M. Fischer's experiments it would appear, that even the very best tin contains small quantities of iron occasionally, which, entering into the compounds afterwards

formed by the metal, cannot be easily separated. The best method to decide upon its presence is to decompose a salt formed from the tin by ammonia, and separate the protoxide which is thrown down. This precipitate is then to be digested in cold muriatic acid; nearly all the oxide dissolves; but, if the portion which last remains be dissolved, it will be found to contain but little oxide of tin, mixed with a large proportion of oxide of iron. This portion, acted upon by warm and strong muriatic acid, will dissolve; and then the the iron may be recognized in the usual manner.—*Kastner, Bull. Univ.* A. x. 313.

Solubility of Corrosive Sublimate.—According to M. Karls, the solubility of corrosive sublimate in alcohol and ether is much increased by the addition of camphor.

At the ordinary temperature, four parts of ether dissolve one of corrosive sublimate, but if equal parts of camphor and sublimate be taken, three are found sufficient. If the proportion of camphor be increased, the following results are obtained:

4 parts ether and	4	of camphor dissolve	2	parts of cor. sub.
4	do.	8	do.	4	do.
4	do.	16	do.	8	do.

Again—three parts of alcohol dissolve one of corrosive sublimate; but if an equal weight of camphor be added, one part and a half of alcohol is found sufficient.—*Bull. Universal.*

MEDICAL JURISPRUDENCE.

Two Cases of Poisoning with Nux Vomica successfully treated.—The first of these cases is thus related by Dr. Basedow of Merseburg. A young lady who was suffering from toothache and headache, and thought it advisable to take a laxative for her complaints, swallowed, at midday, by mistake a table spoonful of powder of nux vomica which she found in the kitchen. She became alarmed on remarking its intense permanent taste; but did not call for assistance till she was almost instantaneously deprived of the power of walking and fell down; yet without losing recollection. Dr. Basedow saw her immediately after, and recognized the nature of the powder she had taken, by what remained of it. She lay in bed with the countenance pale, and exhibiting alternately an expression of indifference and anxiety; she alternately wept and smiled; the eyes were wide open, and the pupils contracted. The respiration was irregular and short, the pulse also irregular, small, not hard or frequent, the skin cool. The forearms were constantly in a half bent position, and the hands and fingers affected with convulsive twitches; the legs, on the contrary, were motionless, rigid, and all the muscles hard and tetanically contracted. The patient had not the slightest pain or sickness; but her breathing became every moment more difficult, and she complained of impending suffocation.

An emetic of five grains of tartrate of antimony, which had been sent for, was administered without delay; and in the course of ten minutes it operated, with the assistance of draughts of tepid tea, and tickling of the throat. After repeated evacuations of the stomach, the matters of vomiting came away without any powder; by which time the symptoms were somewhat relieved, especially the dyspnœa. Small doses of a mixture of oil of turpentine and sulphuric ether were then administered every half hour. In the evening the tetanic spasm of the muscles of the legs, as well as the convulsive movements of the hands, had ceased, and the respiration was free. For three days after, the patient had a clouded look, complained of a sense of bruising over the whole body, and of weariness and rending in the limbs, as if she had been fatigued by a long walk. The toothache and headache disappeared with the commencement of the symptoms of poisoning.

The other case is in some respects similar to that now related. It is described by Mr. Baynham of Birmingham. A girl, twenty years of age, swallowed half an ounce (avoirdupois) of powdered nux vomica, for the purpose of destroying herself. Half an hour after it was taken, Mr. Baynham was called to see her, and found "she had violent spasmodic contractions of the voluntary muscles, but more especially of the limbs, with extreme pain in all the parts affected. The spasm at times continued for three or four minutes, and was then succeeded by some quick change of position, or a long succession of convulsive motions. The muscles of the back were so much affected by spasm, as almost to render it a case of opisthotonos. Finding it impossible to retain her in a chair, she was placed upon a bed, and with the assistance of her neighbors preserved in that situation from local injury. The action of the heart was slow and feeble; the pulse somewhat indistinct, and beating, at an average in the first half hour, 50 in a minute. The surface of the body was cold, and uniformly wet with perspiration. The functions of the stomach and bowels not perceptibly disordered. She remained sensible through her illness. A strong solution of sulphate of zinc was administered with difficulty, since, with every desire to second the object in view, she could not avoid biting through the cup by an incontrollable action of the temporal and masseter muscles. A metallic vessel, which was then substituted, received the impression of her teeth. The emetic operated freely in a few minutes, but did not immediately relieve the symptoms. Abundant portions of gruel, and a large dose of castor oil, constituted the whole after treatment. The pulse, at the expiration of two hours, averaged 70, and had become firm. The convulsions gradually subsided, and finally ceased in about four hours from the period of attack, after which she slept, and awoke early in the evening without any other feeling of illness than what resulted from exhaustion. The next day, although still feeble, she could walk from home."—*Journal der Praktischen Heilkunde.*

Disfiguring of the Countenance.—Hugh Macmillan, and his wife, Euphemia Lawson, were indicted under the statute alluded to on

the 17th December, 1827, for maiming, disfiguring, and disabling Archibald Campbell, by throwing sulphuric acid over him on the 17th of the previous October. The indictment likewise contained a separate charge of murder against them; but, for reasons to be mentioned presently, this charge was afterwards departed from by the public prosecutor.

The facts of the general evidence by which the crime was brought home to the female prisoner, were the following: The Macmillans, who lived in the same stair with Campbell, had long been on bad terms with him; and a few days before he met with the accident, the woman was bound over to keep the peace towards him; on account of which both she and her husband had been repeatedly heard to vow vengeance in the most malignant language. The female prisoner was proved to have obtained, shortly before the commission of the crime, information concerning the corrosive properties of sulphuric acid; and in consequence, hinted that she would some night try its effects on Campbell's cloak, after her husband was asleep. Early on the evening of the 17th October, she was seen to carry out and return with a particular jug, which she placed under the bed, cautioning her children not to meddle with it. Towards midnight, Campbell, on his way up stairs to his lodgings, had approached Macmillan's door, when the door opening a little, he observed a female arm thrust out, holding something white; and under the impression that some mischief was intended him, he was in the act of turning round to retreat down stairs, when a liquid was thrown over him, which, by the intense burning pain it caused, he at once suspected to be oil of vitriol. The alarm being instantly given, the police in a few minutes entered Macmillan's room, where the woman was found dressed, and her husband only dressing himself, as if just raised out of bed. No trace of sulphuric acid could be discovered in the room. But between the alarm in the stair and the arrival of the police, a person who lived in the floor under the Macmillans, heard their window open, and something immediately break on the pavement below. Accordingly, in the *close* under the window were found the fragments of a jug like that which the woman had been seen carrying early in the evening; and these fragments had a sour taste and smarted the tongue. A large quantity of sour tasted liquid was also found on the stair and wall between Macmillan's door and the spot where Campbell stood at the moment of receiving the injury. By a complete chain of circumstances, therefore, though not by any direct proof, the act of throwing the deleterious liquid was traced to Macmillan's wife.

Campbell was without delay transported to the Infirmary, where he arrived about two in the morning. His state at this time, and the progress of the symptoms till his death, twelve days afterwards, were described by Dr. Hunter, the surgeon, and Dr. Nesbitt, the surgeon's clerk of the hospital, in a report which was libelled on in the indictment, and from which, chiefly, the following particulars have been derived. The skin on the left side of the face was partially removed, and the whole presented at first a white disorganized appearance. The eyelids of both eyes were much inflamed and

swollen, and the left eyeball was also severely involved in the mischief, but the right eyeball was uninjured. The skin of the inside of the lips was also white and swollen, and on the back of the left hand, as well as between the fingers, there were white excoriated streaks. In the course of sixteen hours the white marks turned brown. The pain of the face and eyes, which was at first excruciating, became easier under the use of suitable applications. But as at the time of the visit, about twelve hours after the accident, the pain of the left eye, extending to the head, evidently threatened a severe ophthalmia, he was bled from the arm, and next day the operation was repeated. From these measures he derived great relief. The inflammation and disorganization of the eye, however, went on increasing, and soon ended in the bursting of the cornea and discharge of the aqueous humor and crystalline lens. Towards the close of the fifth day, namely, on the evening of the 22d, while apparently doing well, he had a shivering fit, and next morning complained of acute pain at the bend of the right arm, where he had been bled. Inflammation immediately sprung up around the orifice, general swelling of the arm came on, and progressively increased for the three following days. Severe febrile symptoms ensued, and afterwards also difficult breathing, with other signs of pulmonary inflammation. Under these complicated disorders he gradually sunk, and died on the morning of the 30th October. The report concluded with ascribing his death to the inflammation of the arm, and concomitant fever.

The body was examined on the following day by Dr. Hunter and the late Dr. Cullen, whose report of the appearances is here given in detail.

"On Saturday the 31st October, we inspected the body of Archibald Campbell, who died in the Royal Infirmary on the morning of the 30th.

"The right arm was carefully examined and anatomized. We found the vein from which he had been bled very highly inflamed at the wounded part at the bend of the arm. From this point the inflammation had extended upwards to the great vein of the arm and shoulder, and downwards to the small veins of the forearm. These vessels were almost filled with purulent matter, and partly obliterated. The great veins at the upper part of the chest were natural.

"There was a small quantity of serum in the cavity of the membrane which invests the heart, but that organ was itself sound.

"The membrane which covers the lungs and ribs, called the pleura, was inflamed, and covered at the back part with the usual product of inflammation. Sero-purulent fluid was found in both cavities of the pleura. Both lungs, when cut into, were found very highly inflamed, and particularly in the upper and lower lobes."—[I may here add in explanation, that both lungs were most extensively consolidated by serous effusion, red hepatization, and diffuse tubercles, intimately intermingled; and that the last morbid deposition was distributed in irregular masses, some of them of the size

of a pigeon's egg, so as to occupy not less than a third part of the entire volume of the lungs.]

"The left eye had its anterior part entirely destroyed. Some of the humors [the aqueous humor and crystalline lens] had escaped, and the whole organ was disorganized, and incapable of recovery.

"Water was found in considerable quantity on the surface, in the cavities, and at the base of the brain. That organ itself was natural. No other morbid appearance was any where observed.

"Upon the whole, we are of opinion that Archibald Campbell died of inflammation of the veins of the right arm, and of inflammation of the lungs, the former caused, according to the best of our judgment, by the wound of the vein in bleeding." *Signed, &c.*

To complete the medico-legal investigations in the case, it only remains for me to mention the chemical analysis of various articles of the man Campbell's dress, undertaken at the request of the authorities by Dr. Turner, now professor in the London University, and myself. The nature of the corroding fluid employed by the prisoner might perhaps have been presumed from the foregoing particulars of the evidence; but the public prosecutor considered it right not to leave any part of so novel a case without throwing all the light possible on it. It may be worth while, therefore, to relate our experiments in detail; and not only because they exemplify the mode of procedure in parallel instances, but likewise because they supply, in my opinion, the best process for the detection of sulphuric acid in the contents of the stomach of those who have been poisoned with it.

The articles analyzed, were put into our hands a fortnight after the acid was thrown upon them. They consisted of a portion of the rim of a hat, affected here and there through and through—an uninjured part of the same hat for comparative analysis—part of a black stock with its lining and stuffing, all much destroyed—part of the sleeve of a brown coat and its lining, likewise corroded and reddened—and an uninjured part of the same coat for a comparative experiment. The hat and stock, where affected, were moist, and sour to the taste.

The injured part of the hat was boiled in small fragments with distilled water, and a reddish brown fluid procured by filtration. This fluid had an acid taste, reddened litmus strongly, and yielded with acetate of baryta a copious brownish precipitate, which was rendered white by nitric acid, and being then collected and dried at a red heat, weighed 4.3 grains. A small portion of this powder being mixed with a little charcoal, it was heated for two minutes in a platinum spoon before the blowpipe. The product, when dilute muriatic acid was poured on it in a tube, effervesced and emitted an odor of sulphuretted hydrogen, the evolution of which was farther proved by a piece of filtering paper, moistened with solution of acetate of lead, becoming black when suspended within the tube.

We then proceeded to make a comparative set of experiments with the uninjured portion of the hat. A reddish brown fluid was procured, which faintly reddened litmus, and gave with acetate

of baryta a scanty cloud, insoluble in nitric acid, but not forming any deposit when left some hours at repose.

The injured portion of the stock was torn into shreds and treated in the same manner as the injured part of the hat, with precisely the same results. The sulphate of baryta procured from it weighed nine grains.

The injured portion of the coat sleeve and lining was also subjected to the same process, except that the barytic precipitate was collected by the process of subsidence and affusion, without a filter, as it was scanty. The results of the experiments with it were precisely the same as those mentioned above, and they were all procured characteristicly, although the sulphate of baryta formed, did not exceed nine tenths of a grain. A comparative analysis was made of an uninjured part of the sleeve; but the aqueous fluid only tinged litmus faintly red, and yielded with acetate of baryta a faint cloudiness with a deposit.

These experiments made it certain that the fluid used was sulphuric acid; and a short report was accordingly drawn up to that effect.

I need hardly add that the female prisoner, Euphemia Lawson, was found guilty, her husband not guilty. She was consequently condemned to be executed; but as it was the first condemnation under a new statute, her sentence was afterwards commuted for perpetual banishment.

A single particular in the foregoing account of the trial, requires a few observations.

It has been already remarked that the indictment contained a separate charge of murder, from which, however, the lord advocate departed at the commencement of the trial. This he did, because, while it was quite certain that the evidence would establish another capital offence, his entering on the charge of murder would involve a nice legal question, as to the responsibility of the prisoner for an event which depended only indirectly on the injury inflicted by her, and directly on an insignificant surgical operation. The question, however, must be understood as having been waved, not decided. The decision of it of course will not lie with the medical witness. But it may be right for him to understand the nature of the evidence, which, in a similar case, might be required from him, with a view to its decision in the proper quarter. Now in charges of homicide, although it be proved that the injury inflicted by the prisoner occasioned death not directly, but indirectly, through the medium of a cause coming into action after the injury, the prisoner will nevertheless be held responsible, provided the injury was serious, and it shall appear from the intervention of the secondary cause, though not a common event, lay in the natural course of things. Hence, if a person, after receiving a serious injury, should die of hospital gangrene, caught by his repairing to an infirmary where it was prevalent, or of diffuse subcutaneous inflammation, arising in consequence of there being at the time an epidemic tendency to that affection, or even of tetanus, a disease of the supervention of which we can neither trace the causes, nor calculate the probability,—in all these circumstances, would not the person who inflicted the inju-

ry be held responsible for the event? This appears to have been laid down in regard to tetanus, in the case of Alexander Mackenzie. The medical evidence showed that tetanus, though an effect of wounds, neither necessary, nor common, nor such as may be anticipated, is a consequence not sufficiently *accidental* to relieve the prisoner from responsibility, if the injury was severe and his purpose deadly. Does inflammation of a vein arising from phlebotomy —that operation being rendered imperatively necessary by the effects of an injury—belong to the description of accidents here enumerated? Most surgeons, I conceive, would reply, that it lies at least as much in the natural course of events, as tetanus. Neither tetanus nor phlebitis is common after an injury, and neither would ever be held in view by a surgeon in forming his prognosis; but if there is any difference, the latter is on the whole the more common. Can phlebitis be considered a less natural event in the sequence of effects, merely from the circumstance that an operation is necessary for its development, provided the operation become absolutely imperative in consequence of the direct results of the injury? It must be admitted that these are all questions of great nicety, and difficult determination.—*Edinburgh Med. and Surg. Journal.*

THERAPEUTICS.

New Remedy for Tape Worm.—The Prussian government has lately conferred on Dr. C. A. Schmidt of Berlin, an annuity of 200 dollars for the discovery of a remedy against tape worm. The remedy, before its nature was made known, underwent rigorous trial by physicians appointed for the purpose; and their report having been highly favorable, the prescription was communicated by the discoverer, and the drug, prepared according to his direction, was again subjected to trial with equally prosperous results. The opinion of Dr. Natorp, the first reporter, was, that the remedy "might be administered safely to persons of the most delicate constitution; that in twenty-four hours, at the utmost, it brought away the worm; that it required very little preparative treatment, and that its operation was not more exhausting than that of a common purgative." He tried it in seven cases, some of them of long standing and great obstinacy. The first was a middle aged woman who had been several months ill. In her the third dose of the drug brought away two entire worms; she suffered little inconvenience at the time, and soon recovered her health entirely. The second, a child nine years old, who had been affected for three years, likewise passed a tape worm after the third dose, suffered little, and soon got quite well. The third, a young lady, with symptoms which imitated phthisis, began to take the remedy at six in the morning; at four in the afternoon she passed a long worm; and at six the operation had not left the slightest trace of weakness. The fourth, a case of four years standing, likewise got well immediately after passing a long worm. The fifth, an elderly female, had not

continued to take the medicine five hours, before she passed three perfect tæniæ; and her son, after using it for twenty-four hours, passed one eight yards long. The seventh case was a child thirty months old, who was made to evacuate a worm in twelve hours. According to the report of Drs. Kluge and Neumann, who were also charged with experiments on its efficacy, "it never failed to bring away a worm when there was a certainty of its presence; at the same time it was rapid in its operation, quite free from danger, not debilitating, and it expelled the worm alive and entire."

With these high and disinterested commendations before us, we should be doing Dr. Schmidt's plan of treatment injustice, if we did not detail it exactly as he has made it known. At the same time, the preparatory and principal remedies are, we have no doubt, unnecessarily complex, and his rules as to diet unnecessarily precise, and even fantastical. The patient must take as a preparative two table spoonfuls every other hour of the following mixture, beginning in the morning while fasting, and continuing till seven at night. ℞ *Pulveris Radicis Valerianæ min.* ʒvi. *Foliorum Sennæ* ʒij. *Fiant legali arte infusi colati* ℥vj. *Adde Sulphatis sodæ crystallizati* ʒij. *M.* After each dose, the patient must also drink freely of black coffee, strongly sweetened with sugar; in the afternoon a thin pottage *(mehlsuppe)* is taken with herrings; and about eight in the evening salmagundi with chopped raw ham, an onion, a good deal of oil, and some sugar. Sometimes the whole worm is brought away by these preparatory measures, and frequently joints of it are discharged. Next morning at six, the following pills are administered at the rate of six every hour.

℞ *Assæfetidæ et Extracti Graminis, singulorum* ʒiij.; *Pulveris Gutti, Pulveris Rhæi, Pulveris Jalapæ, singulorum* ʒij.; *Pulveris Ipecacuanhæ, Pulveris Digitalis, Sulphur. Stib. aurant. singulorum* ℈ss. *Submuriatis Hydrargyri.* ℈ij. *Olei Tanaceti ætherei, Olei Anethi singulorum gtt. xv. M. Fiant legali arte pilulæ ponderis gr. ij. Consperge lycopodium et in vase vitreo bene obturato conserva.* These pills are taken with a tea spoonful of syrup; and half an hour after the first dose, a table spoonful of castor oil is administered. In the intervals between the doses, black coffee with sugar is to be drunk freely as on the first day. The discharge of the worm usually continues till about two o'clock, when the pills may be abandoned, unless more joints are discharged to the last. If the discharge is very tedious, several additional doses of the castor oil should be taken with sugar. The only food allowed during this course of medicine, is beef tea at midday, and in the evening the same or pottage, either with butter or sugar. On the following day it is well to administer a few more pills, so that no remains of the worm nest may be left behind. Sometimes a relapse takes place, particularly when the rules now laid down are not carefully observed, or when the medicines are frequently vomited. In such circumstances nests of worms are left behind, containing five or six young tæniæ about a finger's length in size. These are with great difficulty expelled, as they are enveloped in a great deal of mucus, and lie concealed in the folds of the intestines. To prevent

the risk of relapse, it is of great use to eat salmagundi frequently, with horse radish, vinegar, and sugar; and every eight days a few doses of the pills should be taken. After the removal of the worms, a generous diet is allowed, consisting of soups, the flesh of young animals, chickens, pigeons, whites of eggs, wine; and a few doses of some bitter tonic are administered daily.

When the existence of a worm in the intestines is doubtful, the following powder is to be given as a trial remedy, the patient having been previously prepared by taking on the preceding evening salmagundi and syrup. ℞ *Pulveris Jalapæ gr. xv. pulveris seminis Cinæ* ʒss. *Pulv. Gutti Hydrargyri submuriatis singulorum gr. vi. Oleosacch. Tanaceti* ʒj. This powder causes much purging; and if a worm is present, joints or even the entire animal will be found in the stools.

The circumstances which contraindicate the above method of cure are pregnancy, the approach or recent departure of the catamenia, active local inflammations, consumption, wasting of every kind, open hemorrhoids, hæmoptysis, and the debility of extreme old age.—*Journal der Praktischen Heilkunde, August*, 1828.

On the Efficacy of Camphor as a Remedy for Puerperal Mania.—In the account of the treatise of Dr. Burrows on insanity, given in the present number of this journal, allusion has been made to that physician's condemnation of camphor as an antimaniacal remedy. In opposition, however, to his statements, and those of Drs. Haslam, Cox, and Halloran, we have, in the journal now quoted, the testimony of professor Berndt of Greifswald to its efficacy in puerperal mania. The form of the disease with which Dr. Berndt appears to be chiefly familiar, and which, if we may be allowed to found a conclusion on his single experience, would seem to be disproportionately frequent in Germany, is that variety which is accompanied by inordinate sexual propensities, or even actual nymphomania. In all the cases he has related, this symptom occurred to an excessive degree, so that he is even disposed to consider it a characteristic sign of *idiopathic* puerperal mania. His testimony in favor of the efficacy of camphor in this variety, is of the most flattering description; and it is coupled with the acknowledgment that in his earlier practice, before he betook himself to the remedy in question, his success was very far from being satisfactory. The following abstracts of some of his cases, will convey an idea of the evidence on which his favorable opinion is founded.

Case 2d. A woman, 26 years of age, of stout constitution, full habit, and free from hereditary tendency to insanity, was delivered of her first child after passing the whole period of pregnancy prosperously; a mild milk fever appeared on the second day; the secretion of the milk, and discharge of the lochia, went on in the natural manner; and in eight days she was able to leave her bed. During the night of the tenth, however, she became very restless. Next morning her speech was confused, her words and actions were hurried, and her eye wandered wildly; in the course of the day she several times broke out into paroxysms of anger, misused her in-

fant, began to talk incessantly and obscenely, and, though naturally of mild temper and gentle dispositions, gave way to extravagant expressions of desire. On the morning of the twelfth, Dr. Berndt found her in the same condition. The countenance was red, but there was no fever present, the pulse being rather oppressed, and the temperature natural. The milk continued to flow, though in diminished quantity; the lochia had nearly ceased; the bowels had not acted for three days. The countenance was alternately pale and red; sometimes she appeared to fall asleep, but from this state she soon awoke suddenly, and resumed her incessant talking. Laxatives were immediately administered; leeches and, subsequently, cold fomentations were applied to the head, and strict quiet was enjoined. Next day no improvement had taken place, except that the determination to the head no longer existed. Having previously had frequent experience of the complete inefficacy of the antiphlogistic method of cure, as well as of the danger of narcotics, Dr. Berndt resolved to try the effect of camphor; and as the patient refused to swallow any thing, he directed an emulsion containing ten grains to be administered in a clyster. The first dose was immediately discharged, but the second was retained. In six hours an obvious amendment had taken place, so that from that time she willingly swallowed what medicines were prescribed for her. Four grains of camphor were therefore administered by the mouth every other hour, and with the happiest effect. In twenty-four hours she was perfectly quiet, in full possession of consciousness, and her association of ideas so correct, that she did not exhibit any confusion till after maintaining a long conversation. In twenty-four hours more, her mind was as entire as ever; but for several days after she complained of exhaustion, confusion in the head, and slight attacks of giddiness. The quantity of camphor she took from first to last, was twenty grains by clyster, and eighty-eight by the mouth.

Case 3d. A healthy woman, 23 years old, and not predisposed to insanity, was safely delivered of her first child, and for some days did well. On the sixth day she complained of her left breast, in which a small tumor could be felt. On the following day she complained of general discomfort; in the course of the night she had troublesome dreams; and next morning her intellects were evidently disordered. She often sprang out of bed, put on her cap before a looking glass, and with a self satisfied air walked to the window to show herself. She exhibited no violence, however, and appeared always in a cheerful humor. Next morning, when Dr. Berndt first saw her, a tendency to nymphomania was obvious in her speech and actions. There was little flushing of the face, some frequency and oppression of the pulse, little or no increase of heat. The lochia continued, though scantily; and the milk was secreted abundantly; but the tumor in the left breast had increased to the size of a hen's egg, and there was a bloody tumor over the ischium. Dr. Berndt conceiving that the disease of the breast was the cause of the mental alienation, directed leeches to be applied to the part, and afterwards mercurial inunctions. At the same time, he admi-

nistered every other hour a grain of calomel with a grain of camphor. In twenty-four hours she became much quieter, had some placid sleep, and for the first time complained of pain in the breast, and in the tumor over the ischium. Under the prolonged use of camphor she got gradually better and better, and the amendment seemed to keep pace with the progress of the two tumors towards suppuration. In six days the breast suppurated completely, and her complaints then ceased.

Case 4th. A woman, 31 years of age, of keen passions and lively disposition, robust in form, and free of hereditary tendency to insanity, was safely delivered of her second child, and in seven days was able to leave her bed, and attend to her domestic concerns. On the eleventh day the commencement of mental alienation showed itself in sudden ill will towards her nurse, and discontent at her husband's necessary absence. Next day the maniacal state was fully formed, and continued without change till seven days afterwards, when Dr. Berndt was called to see her. The countenance at that time was flushed, the eye wild and roaming, her violence excessive. She attempted to scratch, bite, and strike those near her, tore the plaster with her fingers, talked incessantly, loudly, and shamelessly, and her conduct, also, showed an utter disregard of decency. Nevertheless, there was no unusal heat of skin, the pulse was contracted, and she ate and drank voraciously. As she had obstinately refused to take any medicine, and could not be restrained without great force, the strait waistcoat was applied, and a clyster containing ten grains of camphor, in the form of emulsion, was prescribed. At the same time, leeches were applied to the head, the chamber darkened, and all unnecessary attendants were withdrawn. In the succeeding night she had several hours of sleep, from which, however, she awoke only to renew her violence. Next morning the camphor clyster was repeated, and again in the evening; when at length she consented to take medicines by the mouth. Three grains of camphor were, therefore, given every hour; and the effect of this practice was so complete, that on the following morning her furiosity had entirely disappeared. In the afternoon, Dr. Berndt found that her consciousness had returned pretty completely. She asked pardon for the language she had used towards her physician, and complained of a feeling of anxiety which threatened every now and then to deprive her again of reason. The pulse continued oppressed, the skin was moist, the bowels regular, the secretion of milk scanty, the lochia reduced as usual to a discharge of mucus. Two grains of camphor were given every other hour. A long, placid, and refreshing sleep ensued, and afterwards a copious sweat broke out, which removed every vestige of mental disturbance.—*Journal der Praktischen Heilkunde, November*, 1828.

The Efficacy of Tannin in Suppressing Uterine Hemorrhage. By Dr. Porta.—*Case I.* In the first case in which the tannin was given, the lady had been subject to hemorrhage, more or less, during a year; and the result was great emaciation and debility. Va-

rious remedies had been employed without success: a half drachm of the dried leaves of the black muscadel vine was prescribed, mixed in a small quantity of water. The first dose was taken on an empty stomach, and the same quantity was repeated in about an hour after having taken food. This quantity produced no derangement of the stomach, and its action was so prompt that on the same day the hemorrhage ceased, and did not again return.

The success of this case induced Dr. Porta to try the remedy in some others.

Case II. A lady, aged thirty-four, of a sanguineous temperament, of a robust constitution, who had regularly menstruated, and who was the mother of four children, had been subject to hemorrhage for a month, but which was so slight that she did not deem it necessary to seek medical aid. After having taken a journey, the hemorrhage increased very much, with violent pains in the hypogastric and lumbar regions. The duration and the urgency of the case, the hardness and the fulness of the pulse, determined me (says Dr. P.) to take some blood from the arm; and this bleeding I repeated at the end of two days, which succeeded in procuring an alleviation of the hypogastric pains, and in moderating the hemorrhage. I ordered the lady to take small doses of ipecacuanha and nitre, and to remain quiet. Finding, after several days, that the hemorrhage continued, notwithstanding the removal of the symptoms of irritation, I ordered a half drachm of the leaves of the black vine every three hours; which was continued until three ounces had been taken without any perceptible benefit. I was led to consider that the only useful part of the powder was the tannin which it contained, and therefore prepared it from the leaves in the manner recommended by Proust. Having thus procured tolerably pure tannin, I ordered the patient to take two grains of it made into a pill, with a little sirop, every three hours during the day. It appeared to agree very well with the stomach; and at the end of three days the hemorrhage ceased; and the lady has been since very well.

Case III. Quaroni Angiola, aged about forty, was seized, on her recovery from a bilious fever, with severe uterine hemorrhage; and thinking this was only an irregular appearance of the menses, which had not altogether ceased, she did not at first notice it much. As the discharge, however, continued for some weeks, and the patient began to lose her appetite and strength, she applied to Dr. Porta for relief. Recourse was had immediately to the tannin, in doses of two grains every two hours; and in two days the bleeding entirely ceased.

Case IV. Muffi Rosa, thirty-two years of age, of a delicate constitution, mother of an infant which she was then nourishing, was seized, in the fourth month of lactation, with copious uterine hemorrhage, which continuing for several days, she became alarmed, and applied to Dr. Porta. At the time he saw her, the hemorrhage had existed for twenty days, with considerable fever and pains in the loins; the abdomen was soft, but the hypogastrium slightly tumid. The tannin was prescribed in pills, as in the preceding cases;

eight of which served to stop the hemorrhage entirely, and to remove all the symptoms of debility consequent on it.

Case V. Aguzzi Teresa, aged thirty-eight, of a sanguineous, irritable temperament, had had uterine hemorrhage for three weeks, when I was called to her. On pressing on the hypogastrium, I remarked that it produced pain, and that the pain extended towards the loins. She had irregular accessions of fever, and the pulse was frequent; but there was no notable tumor in the hypogastrium. I considered that the tannin might be prescribed with effect, as in the former cases, and ordered three grains to be taken every three hours. About two scruples were taken in the course of about ten days, at which time the hemorrhage had entirely ceased.

Dr. Porta states that these are only a few of the numerous cases in which he has employed the tannin with success; and, during three years, he has only met with two cases in which it failed. From the repeated opportunities he has had of observing its action, Dr. P. has drawn the following corollaries:

1st. That this medicine acts in a particular manner upon the uterus, when that organ is the seat of an irritation which gives rise to active hemorrhage and when this bleeding results from chronic metritis.

2dly. In hemorrhage arising from actute metritis, it is necessary first to combat the inflammation by repeated sanguineous evacuations, and then to have recourse to the tannin.

3dly. It has no beneficial effect in those hemorrhages which are the result of organic alteration of the uterus.

4thly. This remedy ought to be preferred to all others in the treatment of uterine hemorrhage, not only on account of the promptitude with which it causes the symptoms to disappear, but because the dose necessary for this purpose is so small as not to disagree with the stomach even of debilitated and irritable persons.—*Annali Universali di Medicina.*

Nitrate of Soda in Dysentery.—This salt is highly recommended by Dr. Meyer (Hufeland's Journal) in epidemic dysentery. So great was its success, that it has become a common extemporaneous prescription. He did not lose two individuals out of one hundred sick. The dose is from half an ounce to an ounce dissolved in eight ounces of gum water. It differs essentially from nitre in its operation, acts as a refrigerant, purges gently, and determines to the skin. According to Dr. Meyer, it is indicated in all inflammations of the digestive canal.—*Bulletin Universal.*

Experiments and Remarks on the Internal Exhibition of the Acetate of Lead. By William Laidlaw, Surgeon.—Very opposite opinions are entertained by individuals, equally distinguished for their candor and erudition, relative to the internal administration of the acetate of lead; some considering such use of it as a display of unqualified rashness, while others conceive it to be a valuable remedy in many dangerous diseases.

That the incautious use of the acetate of lead will produce deleterious effects, it would be equally idle and uncandid to deny. The colica pictonum, ever since the interesting investigations of sir George Baker on the subject, has been universally allowed to be the effect of the gradual introduction of that salt into the system; and, perhaps, it is this circumstance which has prejudiced so many against the remedy. But the production of so baneful a complaint, by the gradual introduction of lead into the system, is not a conclusive proof, or rather is no proof at all, that its judicious use may not effect salutary results.

Were this not admitted, arsenic, the oxymuriate of mercury, and many other articles of the materia medica, might, with at least equal propriety, be discarded.

Agreeing, then, with those who conceive that the judicious exhibition of this remedy is not only justifiable but proper, the question to determine is—in what the "judicious" use consists.

By its judicious use, I understand the administration of it in such quantities as shall most speedily, and, therefore, most safely, cure the disease for which it is employed. I have said most speedily, and, therefore, most safely, because I am persuaded that the latter object will be attained in the same proportion as the former is accomplished. But the administration of it in small doses, such as half a grain, especially in uterine hemorrhage, does not appear to be the proportion best calculated most speedily to effect a cure; as such a mode of exhibition, from the slow operation on the disease, will ultimately require a greater quantity to be used than if the doses had been larger, so it resembles more the insidious manner of its introduction in manufactories, and along with food; by which paralysis and convulsions are produced.

Some information on the subject, perhaps, may be obtained by observing the effects produced by certain quantities on animals. From the experiments of Orfila, it appears that from one to three grains of the acetate of lead have been frequently injected into the jugular veins of weak and middle sized dogs, without their having appeared to be incommoded by it. In these experiments, however, it was directly introduced into the circulation, whereas in the cure of disease, the circulation is only indirectly affected; and it will, therefore, require, to produce similar effects, a proportionally greater quantity; but what that quantity is, or ought to be, does not from these experiments appear.

Examples, it is true, are given of larger quantities having been introduced into the stomach, even to the extent of a drachm and a half in the solid form, and to an ounce in solution, without material injury having been sustained; but as both the animals immediately vomited, the experiments do not show what the result would have been had these quantities been retained. To ascertain the quantities which could be received and retained in the stomach, and to observe the subsequent effects of them on the animal economy, do not, indeed, appear to have been the objects of the experimenter; but rather to determine the nature and extent of injuries sustained by

the operation of excessive quantities, with the view of adopting the most efficacious remedies.

Valuable, then, as these experiments are, for having unfolded some of the effects produced by the internal exhibition of this salt, yet we are still left to enquire what quantity is the most fit for its administration in the cure of disease.

At the Western Dispensary, for the complaints of women and children, I have often seen Dr. H. Davies successfully employ it in cases of uterine hemorrhage, in doses of two grains, combined with opium, to be taken every third or fourth hour, till the complaint was removed, or unfavorable symptoms induced. In the same complaints, and in similar doses, I have given it to the extent of ten grains daily, for four successive days. This, however, was not done without great anxiety, and close attention to its effects. No unpleasant sensation was complained of, and no deleterious symptom. Although when patients are in circumstances which render compliance with the almost indispensable requisites—rest and quiet—easy, it is rare that more than one half of the above quantity is ever necessary; yet even with them, in extreme cases, it may occasionally happen that the remedy must either be pushed farther than forty grains, or abandoned in despair, as incapable of removing the malady.

In such cases, it becomes a question of moment satisfactorily to determine whether it be really justifiable thus to proceed without being aware what the ultimate consequences may be. This question I was anxious to set at rest. On the one hand, from the extent to which it had been carried with salutary results, I was inclined to believe that it might be extended still farther; but on the other, I was not aware of any example of its having been employed in a greater quantity, or even to the same extent as that above mentioned.

In order to determine this point without exposing any of those who might have trusted themselves to my care, I prepared the following prescription, which I purposed to take myself till the occurrence of circumstances which might indicate the prudence of omitting it.

℞ Plumbi acetatis ʒi.
Opii gr. viii.
Extracti gentianæ ʒi.
Acidi acetici diluti q. s. fiant pilulæ xviii. quarum sumature una ter die.

September 12, 1827, when I commenced taking these pills, each three of which, it will have been perceived, contained ten grains, my health was perfect; and no deviation from this state was perceptible till the evening of the 14th, when the pulse was found somewhat slower, and a metallic taste perceived in the mouth.

16th. The last two pills on the 15th, containing nearly seven grains, were taken within two hours of each other; but no unpleasant effects were experienced. The pulse, in bed, was sixty, and indistinct; after exercise, sixty-four, and more distinct; the metallic taste stronger, with some tenderness of the gums; but having

been engaged for some days in putting up preparations in a solution of the muriate of mercury, I was in doubt whether the tenderness of the gums was to be attributed to this circumstance or to the lead. Forty grains having now been taken (the last seven grains within two hours) without any other perceptible inconvenience having been produced than a metallic taste, and, perhaps, some tenderness of the gums and constipation, it was resolved to ascertain the effect of a larger dose; ten grains were, therefore, taken at once; immediately after which, slight pain of the stomach and nausea were felt; pulse fifty-eight and weak.

Early on the morning of the 17th, the pain of stomach and nausea had not increased, but the sleep had been much disturbed; the pulse, while in bed, fifty, and so indistinct as to be counted with difficulty; some inconvenience experienced from weakness, especially at the knees; urine diminished in quantity, and high colored; bowels not acted on since the 12th.

The symptoms varied but little till an early hour on the morning of the 18th, when I was awoke with severe and unremitting pain of the stomach, with nausea; vomiting was suppressed with difficulty. Immediately three drachms of the sulphate of magnesia were taken in solution; the pain instantaneously became much relieved; shortly after which I went to sleep; awoke at seven, and found the pain entirely removed. A similar quantity, however, of the sulphate of magnesia was repeated, with a view of effecting the entire decomposition of the salt. The pulse rose from fifty to sixty; it was still weak, but distinct; the weakness at the knees was somewhat diminished; the urine had become more free, was of a dark olive color, and sweetish. The pain did not return; and without the further aid of medicine, in a few days I had perfectly recovered from every unpleasant sensation. When the experiment was commenced, paralysis and convulsions, which are the severest, but rather the accidental than the usual, effects of the introduction of this salt into the system, were not much dreaded, but the practicability of administering it until its peculiar or characteristic symptoms, colica pictonum, were produced, was certainly anticipated. The interruption which prevented this effect, I think there can be no doubt must be attributed to the last dose, ten grains. The uneasy sensations, which produced an interruption to the experiment, were not the characteristic effects of the introduction of the salt in excess into the system—were not colica pictonum, but unequivocally gastrodynia; and it is presumed, were referable not to the aggregate amount of the salt taken, but to the excess of the last dose—not to the specific effect, as colica is presumed to be, but to the styptic quality of the salt. The sensation, excepting the nausea, precisely resembled in kind, though much greater in degree, what I have often experienced from eating acid fruit. That the pain arose from the styptic quality of the salt appears to be corroborated by the instantaneous relief obtained, as I conceive, from the decomposition effected in the stomach by the sulphate of magnesia. Colica pictonum, too, is a malady which requires days, weeks, or sometimes even months to be subdued; but the removal of the pain in the experiment was almost instantaneous.

Being persuaded, then, that the interruption arose from want of due care, I was resolved to institute another attempt with more caution.

Accordingly, on the 10th of October, a drachm of the acetate of lead, eight grains of opium, with crumbs of bread, and acetic acid, was formed into eighteen pills, three of which to be taken daily till colica pictonum was induced, or other circumstances rendered its discontinuance necessary.

11th, 2d day. Tongue white; taste in the mouth metallic; pulse sixty; urine high colored.

12th, 3d day. Appetite good; metallic taste more distinct; gums tender and turgid; pulse fifty-five; weakness of the knees; urine high colored; bowels not acted on since the 10th. Aperient pills, composed of rhubard and jalap, were taken.

13th, 4th day. Eight of the aperient pills taken; bowels moderately acted upon; metallic taste, tenderness, and turgidity of the gums less severe; urine more natural; debility diminished; pulse fifty-six.

14th, 5th day. All the symptoms diminished; functions natural.

15th, 6th day. An unpleasant sensation of tightness in the chest, increased by exercise; metallic taste strong, not sweet, rather disagreeably bitter; gums turgid and tender; no nausea, constriction of the throat, pains of the stomach or abdomen; pulse fifty-two; after exercise eighty-five; heat ninety-six; after moderate exercise 100½; urine high colored; bowels confined.

16th, 7th day. The uneasiness in the chest increased; metallic taste stronger; gums more turgid and tender; pulse fifty-two, rather weak; urine high colored; bowels confined.

The first supply of pills, containing a drachm of the medicine, having been finished, a fresh parcel was made.

17th, 8th day. The affection of the mouth increases in severity; the unpleasant sensation in the chest and debility are also increased; countenance sallow; pulse fifty-eight; respirations in the space of a minute, twelve, and somewhat laborious; no nausea, pains of the stomach or abdomen; bowels confined. From the severity of the symptoms it was now judged prudent to put a termination to the experiment.

18th, 9th day. Last night ptyalism came on; all the other symptoms continue severe. This morning a sensation of tightness in the hands and feet, especially in the fingers and toes, was felt, gradually diminishing in distinctness as it extends beyond those parts; the sensation is not that of acute pain, but is rather a numbness, increased or becoming more perceptible by the using of the affected parts.

By the free exhibition of the sulphate of magnesia, all the above symptoms, with the exception of the affection of the mouth, gradually decreased, so that they ceased after the fifth day to be troublesome. The ptyalism was never profuse, but sufficiently copious, almost entirely preventing sleep for three or four nights, and troublesome in some degree for several weeks.

By the eighth day seventy grains of the acetate of lead had been taken, and yet no indication of the complaint had appeared, the in-

ducing of which was the chief object of the experiment. From these experiments, then, it appears, that the acetate of lead may be taken in three grain doses, to the extent of ten grains daily, for from five to seven days, without the risk of inducing colica pictonum.

By this conclusion, however, it is not wished that it should be understood as asserted, that in every instance the salt can be pushed to this extent without inducing other unpleasant symptoms, which may render it necessary to put a termination to its exhibition. Besides, idiosyncrasies, in the administration of this medicine, will be found to occur as in other remedies. Some patients I have seen, with whom it could not be carried beyond twenty grains without inducing vertigo, nausea, and in others even vomiting; while in the experiments above detailed, and in another case which occurred to me, seventy grains were exhibited without either these or symptoms of painters' colic having been induced. The quantity, therefore, which may be given in the latter cases with propriety would be extremely rash and ill judged in the former.

Although, then, from these experiments the conclusion that from fifty to seventy grains of the salt may be administered without the risk of inducing colica pictonum will be found generally to hold good, yet much will depend on the circumstances of particular cases, which can only be positively determined by careful observation.

From these experiments it also appears that colica pictonum is not so frequently nor so easily produced by the use of the acetate of lead, as has been supposed. Gripes, it is true, are often thus produced; but these seem to be an incidental and not a necessary consequence, arising either from a peculiarity in the habit of the patient, a deterioration of the opium, or the proportion of it employed having been too small. In the above experiments the opium employed was British, and in the proportion of rather more than one to eight of the salt; but there was not the slightest attack, during the whole seven days, of gripes, nausea, or pains in the stomach. Should griping be induced previous to the necessary quantity of the remedy having been administered, it does not appear that this should be considered a sufficient reason for suspending its use, but rather that the proportion of opium should be increased to the requisite extent for the suppression of the uneasy sensations. Viewing these sensations not in all their relations, the limited survey may induce a belief that they are really the disease denominated colica pictonum. They are, however, it is presumed, materially different, arising entirely from the irritation produced by the salt in passing along the intestinal tube, and can, therefore, be removed by the diminution of that irritation. But colica pictonum seems to be produced by the constitution being fully imbued with the metal, and which unfolds its influence on the system in regular paroxysms affecting the intestines; which paroxysms, though they can be moderated by opium, cannot be entirely overcome otherwise than by the removal of the metal from the system by the various excretions. The difference between the gripes, which are the effect of a recent exhibition of the salt, and the paroxysms, which are the result of a longer conti-

nuance and more gradual introduction of it, may, perhaps, be fitly marked by denominating the former a local, the latter a constitutional affection.

On the general operation and local action of the salt, it may be remarked, that by exhibiting it in the proportions employed in the experiments, its influence on the animal economy, especially on the circulation, is considerable. The pulse, in the first experiment, when ten grains were taken at once, was remarked to be not more than fifty, and so feeble as to be counted with difficulty; and in the second experiment, where that quantity was not exceeded in a day, it was as low as fifty-two. It was remarked to be similarly affected in four of the six cases of colica pictonum quoted by M. Orfila, from the dissertation of M. Merat. In one of the cases it was so slow as to give only forty pulsations in a minute. I am not quite sure of the lowest degree to which the pulse may be reduced consistent with life; but I am inclined to believe that when colica pictonum terminates in death, it is not from inflammation, but from the exhaustion of the vital powers, induced from the operation of the poison. Orfila has given two cases which terminated fatally, but the post mortem examinations afforded no satisfactory explanation of the cause of death. The chief symptom was great exhaustion, indicated by a pulse that was scarcely perceptible. But although the sedative power of the salt when uncontrolled produces such effects as shall terminate in death, yet when regulated with a due knowledge of its powers, its operation may be rendered of great value in hemorrhagies; for this purpose, however, it is necessary to allow the salt to accumulate in the system.

On the third day of the second experiment it will have been remarked that all its effects, viz. metallic taste, turgidity of the gums, and sinking of the pulse, were gradually becoming more marked. But aperient medicines having been administered on the evening of the same day, those effects on the fourth day had all diminished, and on the fifth day the metallic taste was scarcely perceptible; the tenderness of the gums gave no uneasiness, and the pulse rose to fifty-six. But by allowing the salt again to accumulate, its effects once more became manifest; clearly showing that the action of the aperients diminished the power of the remedy by impairing its effects on the system. I have uniformly found that when the bowels continued regular or easy, the cure was more protracted than when they were confined.

Aperients, being decidedly disadvantageous, ought not, therefore, to be employed till the malady is checked, unless from some peculiar circumstance they are distinctly indicated.

The sedative effects of the salt, by which the impetus of the blood is so much diminished, there can be little doubt, is effected by absorption, for it is produced, not suddenly, but after some time.

* * * * * * *

Some attention is necessary as to the form in which the acetate of lead is administered. In the above experiments it was employed only in the solid form. I have, however, in practice, also employed it in the fluid state; and, both from the experiments of Orfila and

my own observation, I conclude that its operation in the latter way is more rapid and energetic, and, therefore, that it demands proportionally greater caution in its exhibition. The solution I employ contains two grains of the sugar of lead to the ounce of equal parts of acetic acid and distilled water, and eight or ten minims of the tincture of opium. I have not found it necessary, even in severe cases, to employ more than from three to six ounces of such a solution. As to the propriety of using one of these preparations in preference to the other, the seat of the disease, perhaps, should have some weight in forming the determination; for, when the diseases are dysentery, diarrhœa, hemorrhois fluens, uterine hemorrhage, or hæmaturea, there is, to say the least of it, some plausibility in giving a preference to the solid form, because, in its passage through the intestinal tube, it comes, in the one set of cases, in immediate contact with the affected parts, and in the others very nearly so. On the other hand, when the maladies are hæmoptysis, epistaxis, or purpura hæmorrhagica, there are the same reasons for giving the preference to the fluid form. The chief point, however, to be remembered is, that a smaller quantity in the fluid form serves the same purpose as a greater in the solid.

Whatever form shall be deemed preferable, it is of the first importance that the most scrupulous care shall be employed in the formulæ prescribed, to avoid every article which has a tendency to decompose it, either entirely or partially. Sulphuric acid effects the decomposition rapidly. Even the proportion contained in the infusion of roses accomplishes this readily. All the alkalies, neutral salts, and carbonates, do the same with facility. The carbonate of soda is, indeed, its best test, but the sulphate of magnesia its best antidote. The vegetable acids do not disturb it; and, therefore, wine, if necessary during its exhibition, may be allowed. The best formula, I think, for a pill mass, is—

℞ Plumbi acetatis, gr. xxiv.
Pulveris opii, gr. iv.
Micæ panis, gr. xx.
Acidi acetici, q. s.
Fiant pilulæ, xii.

And in solution—

℞ Plumbi acetatis, gr. xvi.
Tincturæ opii, ℥j.
Acidi acetici diluti, ℥xv.
Aquæ distillatæ, ℥ij.
Fiat mistura, cujus quâque quartâ horâ cochleare amplum capiatur.

If, unfortunately, on any occasion, symptoms of colica pictonum should supervene after the administration of this salt, the best means for counteracting such effects is the free use of the sulphate of magnesia in solution; and, after the bowels shall have been freely acted on, opium in such quantities as may be necessary for subduing the pain.

The salt I consider as chiefly of value in *passive* hemorrhages;

active hemorrhages, therefore, ought, by the use of the lancet, to be reduced to the passive form, anterior to its administration.

It is not, however, intended that it shall be understood from this statement that the patient, whose powers of life, from copious hemorrhage, are fast ebbing, is to have her best interests confided entirely to the administration of internal remedies. On the skill and prompt action of her medical attendant her life often depends, and his duty imperiously calls on him to have instant recourse to whatever the exigency of the case may require.

I shall now conclude by selecting three cases illustrative of the powers of the remedy.

First, of hemorrhage in threatened accidental abortion.

Second, of hemorrhage arising from debility consequent on abortion.

Third, of hemorrhage from the stomach.

I. *Of Hemorrhage in threatened Abortion.* On the 16th of July last, a lady, in the fifth month of pregnancy, after having taken exercise to an imprudent extent, was affected with alarming hemorrhage. I was instantly sent for, and found that the hemorrhage was considerable, the uterine contractions severe and regular, commencing at the back, extending to the abdomen, and thence darting to the pubes and thighs, expelling coagula at every return. She was directed to be kept quiet and cool, and acetate of lead, in the form of pills, to the extent of twelve grains daily, and a draught after each dose, consisting of equal parts of distilled vinegar and water, to be taken. In twelve hours the symptoms began to give way, and, by the time half a drachm of the acetate was taken, the pains had entirely ceased, and the hemorrhage disappeared. By some precautionary measures, and without the farther aid of this medicine, the lady was enabled to go her full time, and was confined in November last.

II. *Hemorrhage arising from Debility consequent on Abortion.* Elizabeth R., aged 30, August 1st, 1827, has had three miscarriages in succession, viz. one in March, 1826, one in August following, (of twins, from which she suffered severely from flooding,) and one in January last, which occasioned still more distress, from the same cause. During the first six weeks of her present indisposition, she has not been well for a longer period than from three to seven days at a time; and when the attacks recur, they generally continue from ten to twelve days without intermission. Previous to the last miscarriage, she sustained much inconvenience from vertigo; its severity was so great as to render her incapable of walking without assistance, and even continued after the miscarriage to such a degree as to induce her medical attendant to decline employing the necessary means for the suppression of the discharge from which she was daily suffering. Subsequently, however, for this purpose, she took mixtures to the extent of twelve half pints, without benefit, and then was advised to go into country. The discharge still continuing to harass her, she became much debilitated and very irritable; so much so, that even moderate exercise, or sudden alarm, brought on severe flooding. Last July, in one of these attacks, she is re-

ported to have lost from two to three quarts of blood. At present, a full pint is lost daily; the vertigo is so severe as to affect the sight. She is weak in her person and desponding in her mind, from the supposition that she cannot recover. Pulse seventy-six, rather weak; appetite good, and bowels regular. From a disinclination to administer the acetate of lead, various astringent remedies were previously employed, but to no purpose. The acetate of lead was then had recourse to, and, forty grains having been taken in the course of four days, a perfect cure was established. When twenty-four grains of the acetate of lead had been taken, this patient complained of pains in the abdomen, but by increasing the proportion of opium, they were entirely subdued.

III. *Case of Hæmatemesis.* Mrs. I., aged fifty, 8th May, 1827. Two years ago the catemenia ceased; about three months after which, she began to expectorate blood every fourth or fifth week. She was also affected with headache and severe pains in the back. For these complaints she had been cupped, and had taken a great variety of cathartic medicines without any marked relief. The quantity of blood hitherto expectorated had been inconsiderable; but this morning above a pint had been vomited at once. A cathartic medicine was ordered, and directed to be given so as to act freely on the bowels. On the 11th, notwithstanding that the bowels had been freely moved by the medicine, she suffered much from vertigo: owing to this circumstance, she fell, and received a wound on the right temple. After the fall, severe sickness intervened, and she is reported to have vomited a wash hand basin two thirds full of blood. Vertigo still urgent; was bled from the arm, and had a blister applied to the nape of the neck, and cathartics continued with astringents. Some relief was obtained from these remedies; but two days afterwards (having visited the patient in the morning) I was called in haste again to see her, as she appeared to be dying, from the large quantity of blood which she had vomited, and which was reported to be above two quarts. She was much exhausted; pulse with difficulty could be felt, was small, frequent, and intermittent; countenance sunk, and of a deathlike aspect.

The acetate of lead, in solution with opium, was immediately ordered; three doses only of which were taken; the vomiting never returned, and although, from the extreme state of exhaustion to which she had been reduced, the patient was for some time in a precarious condition, yet ultimately she perfectly recovered, and, by occasional small bleedings, now enjoys better health than she has done since the cessation of the catamenia. The mixture taken contained only six grains of the acetate of lead; which shows the superior energy with which this remedy acts in solution.

Warwick street, April 28, 1829.—*Lon. Med. Gazette.*

Borax in Cutaneous Diseases.—Dr. Reinhart states that he has used a solution of borax (℥ss. to an ounce of water) with great success, as a local application in various chronic cutaneous diseases. Pieces of linen are to be dipped in the solution, and applied to the part. A slight sense of heat, and some redness of skin, result; if

these be considerable, the application is to be intermitted for a few days.—*Journal der Prakt. Heilkunde.*

[We are indebted to our respected contemporary, the North American Journal, for the two following interesting articles.]

The Effects of certain Heroic Medicines on a Healthy Individual.—A report of experiments bearing this title, has been published in Buckner's Journal, and we avail ourselves on this occasion of the abstract furnished by the *Bulletin des Sciences Médicales.*

The substances on which the author, Dr. Joseph Waltl, experimented, were arsenious acids, belladonna root, opium, white hellebore, bitter almonds, extract of hyoscyamus, and Peruvian bark.

1. *Arsenic.* Six grains of *arsenious acid*, in fine powder, were thrown on burning coals, in Dr. Waltl's room, the coals having been taken away after they had ceased to give out any vapor. During the day the author experienced no inconvenience in his room; but, after he had been in bed for about two hours, he was awakened with a sensation of great anxiety and constriction about the trachea; the pulse was irregular and accelerated, and he suffered from headache. After having opened the window, and given issue to the vapors, he again went to bed much fatigued. This was followed by a copious sweat; and in the morning the only inconvenience was a little headache. Another person who had likewise respired the arsenical vapors, experienced the same effects, but more intensely. It results from these premises that the vapor of arsenious acid acts chiefly on the respiratory passages with which it is in immediate contact. Dr. W. is of opinion that this vapor, applied to the skin, but carefully excluded from the lungs, would be an efficacious remedy against ichthyosis.

2. *Belladonna Root.* Two grains of the root of belladonna gave rise to vertigo, cephalagia, somnolency, and a kind of drunkenness: the face became very red, and the pupils dilated. On looking on a book, the experimenter saw each letter multiplied. The dryness of the throat was very great. After four hours sleep, there was a complete return of the normal state. A quarter of a grain of the belladonna root failed to produce any effect. We must, therefore, be careful in ordering doses which shall neither be too large nor too small, if we wish to obtain good effects from it, in the treatment of diseases.

3. *Opium.* This substance, whether indigenous or exotic, at a dose of four grains, produced the phenomena of narcotism, which, as being familiarly known, need not be detailed here; there also ensued vomiting and sweating.

4. *White Hellebore.* Two scruples of white hellebore in decoction, with an ounce of water, furnished a liquid which was not acrid, but rather mild. A tea spoonful taken fasting having produced no effect after the lapse of an hour, the experimenter took a table spoonful. In three hours afterwards, there was a burning heat of the body, and a copious sweat of five hours duration. Six hours after the ingestion of the liquid, the eyes could not tolerate the light, the head was forcibly applied against the chest, so that

the slightest effort to restore it to its natural position caused a most violent headache, and intolerable pain of the occiput. The pulse was very much accelerated—there was sometimes a sensation of coldness and sometimes of heat, with great fatigue; there were, finally, ten evacuations by vomiting, and still more numerous ones per anum. The decoction had been taken at eight o'clock in the morning. At seven in the evening there was a feeling of appetite: the night was passed tranquilly, and on the following day nothing unusual occurred. It follows, from the above, that we must be cautious in the doses of the white hellebore, when it seems to be indicated by the nature of the disease.

5. *Bitter Almonds.* These, when taking fasting, in doses of half an ounce, produced, at the expiration of half an hour, violent pains of the head, and nausea for three hours. There was no other sign of poisoning. Ammonia inhaled in a gaseous form gave no relief.

6. *Extract of Hyoscyamus.* This substance, prepared from young plants which had grown on a rich soil, was often taken fasting in grain doses, but produced no effect; nor was there any more decisive result when the quantity was carried to six grains. This was probably owing to the experimenter having taken the plants when too young, and from a situation unfavorable to the development of its active principles. One ounce of the seeds of the henbane, bruised in a mortar, and mixed with six ounces of water, and boiled for two hours, formed a very bitter and disagreeable decoction. Dr. Waltl took the half of it in three doses at intervals of an hour, but without any effect. The dry and ripe seeds of the henbane would seem, then, to be as little narcotic as those of the poppy.

7. *Peruvian Bark.* Two drachms of brown bark in powder, taken for three days, produced no effect. On the fourth and fifth day the appetite became very great, and remained so for eight days. The alvine evacuations were fewer. The dose of the bark being carried as far as half an ounce per diem, the appetite was kept up to the same pitch without any inconvenience. Experiments prove, therefore, what was already known, that the bark is an excellent means of favoring digestion, especially when the stomach is in a state of atonic debility.

The Effects of Entire Abstinence from Solid and Liquid Food.—This is a question which exercises a very important bearing on therapeutics. It has been the theme of much, and at times no very measured, discussion. It is one, moreover, which nearly and deeply concerns mankind at large, not only on account of abstinence being made a means of relief from disease, by the professional attendant, but also on account of the possible widely extended application of the measure among all classes of society, without any other counsel than the consciousness of their being sick. The plainest dictates of instinct, and arguments of common sense, are in favor of its adoption under circumstances of bodily disturbance and disease; and it is to be greatly regretted that false theory, and the vaguest

analogies, should have induced a portion of the medical community to discountenance it.

We wish, at this time, more especially to direct the attention of our readers to the *Experimental Enquiries* made by Dr. Collard de Martigny. 1. *On the effects of complete abstinence from solid and liquid food on the organs of the body; on the quantity and composition of blood, and the nature and course of the lymph.* 2. *On the morbid alteration of the fluids; the proper time for abstinence and bleeding in certain diseases; the use of the lymphatic vessels; and the existence of a lymphatic temperament.*

The effects of entire abstinence on the organs, as evinced in dogs and rabbits starved to death, are general and excessive emaciation, and a diminished size and colorless state of the muscles. The heart has little volume, and, as well as the aorta, vena cava, and pulmonary artery, contains a very small quantity of blood. The lungs are entirely empty of blood; the lining mucous membrane is pale; the liver, spleen, pancreas, and kidneys, are remarkably pale and small; their vessels empty, and parenchyma having little consistence. The vesical mucous surface is of a pale white. The gall bladder is of very considerable size, and distended with a large quantity of greenish yellow bile, limpid and very fluid.

The stomach is contracted on itself, the mucous coat exhibiting numerous folds, running in every direction, but especially from the cardia to the pylorus. The medium thickness of the stomach is a line and a half; its cavity is empty; the pyloric portion has a deep yellowish tint; when washed, its internal membrane towards the cardia is of a silvery whiteness, as Haller has already remarked, and towards the pyloris of a yellowish white. *In no part did it exhibit the slightest trace of inflammatory alteration.*

Throughout the entire extent of the intestinal tube, the mucous membrane is wrinkled; that of the small intestine is deeply colored with a greenish yellow, which is less evident in the large intestines. *As in the case of the mucous membrane of the stomach, that of the intestines exhibited, in its appearance, color, and consistence, no sign of inflammation.* Both the small and large intestines are of diminished diameter, and contain a greenish yellow matter; which fluid in the duodenum, increases in consistence in proportion as we leave the stomach.

In one case, the intestinal tube contained, throughout its entire extent, a small quantity of a dark green matter of a very putrid odor. The mucous surface of the inferior portion of the small intestine, and of the cœcum, in which it most abounded, was studded with violaceous spots. The mucous membrane of the stomach was strongly contracted and wrinkled, and of a slightly roseate hue at its pyloric extremity.

There is a notable difference in the duration of life between dogs and rabbits deprived of all nutriment; the carnivorous animals surviving much longer than the herbivorous. Age and size are also modifying conditions; since the older and larger the animal, the greater are its powers of living under a privation of all aliment. Thus, of three dogs submitted to the above experiments, the largest

lived thirty-two days; the second, which was larger than the third, lived twenty-seven; while the third and smallest survived only twenty to twenty-one days.

The medium period in which three rabbits survived entire abstinence from food, was ten to twelve days. It is greatly abridged if the animal be very young; as, in the instance of three rabbits six weeks old, two died on the seventh, and one on the eighth day of starvation. A rabbit only three weeks old died on the night succeeding the third day of privation from food.

The contrast in the powers of enduring hunger between the carnivorous and herbivorous animals, was clearly exhibited in the cases of the rabbits seven months old, and the third dog mentioned above. Their size was nearly equal, and yet the first lived but ten or twelve days, while the latter survived three weeks.

In rabbits there is much less general emaciation and loss of the cellular tissue of the parenchyma of the organ; the muscles preserve nearly three sevenths of their first size. *All the mucous membranes are white, and without any appearance of inflammation.* The cavities of the heart, the beginning of the aorta, and venæ cavæ, and pulmonary vein, contain a small quantity of blood. The small vessels and capillaries are destitute of this fluid; the cornea is sunken and rather cloudy. It was never observed to be ulcerated.

In regard to the *effects of abstinence on the quantity of the blood*, Dr. de Martigny shows, by direct experiments, that there is a progressive diminution of this fluid throughout the entire period of alimentary privation.

Not only is there an *alteration in the quantity*, but also in the quality or composition, of the blood after prolonged abstinence. The quantity of albumen is increased, that of fibrine diminished. For farther particulars on this head, we refer to our department of chemistry; wishing, on the present occasion, to restrict ourselves to what has a direct therapeutical application in the experiments and inductions of Dr. de Martigny.

This gentleman concludes his chapter on "*the effects of entire abstinence on the quantity and course of the lymph*," by saying that the velocity of the course of the lymph in the vessels must decrease in direct proportion to the diminution in quantity of this fluid; and that, towards the conclusion of the period of forced abstinence, the slowness of the course of the lymph is such, that this fluid merely flows in drops, at intervals, from an opening made in the thoracic duct above the diaphragm. The first and immediate effect, however, of fasting is to accelerate the progress of this fluid. The change in the *composition of the lymph* after entire and prolonged abstinence, is also distinctly shown by the author.

He asserts, in reference to the evidences of local inflammation designated in some of the examinations after death from abstinence, that these are a *complication*, and are, at any rate, of very rare occurrence; since out of eighteen animals open and examined with the most scrupulous accuracy, he only met with three examples of this nature. Two of these had an evident origin. In the first, the microscopic ulcerations of the tracheal membrane were conse-

cutive to an incision of the trachea, and probably, also, to the accidental introduction of dust or other light matters floating in the air. The violacious spots of intestinal mucous membrane of the dog already mentioned, were due to the presence of excremental matters, become putrid and infectious in the intestine.

In the recapitulation of his subject, the author says that the *disease* produced by prolonged abstinence until death, is the result, 1st, of an ulceration of the solids; 2d, and chiefly of alterations of the blood, which are at once the *mediate* and *immediate* causes.

The "*reflections on the proper time of low diet and bleeding in certain diseases*," without being long or profound, are, nevertheless, worthy of all attention. Abstinence has long been considered to exert the same effects which are produced by bloodletting, but in a slower manner. The author thinks that we rely too much on the safety with which low diet can be persevered in. What, he asks, results from this course? "The patient continually loses flesh; his sensibility and imagination are exalted, while his physical and moral powers are prostrated; his sleeplessness is increased; his weakness or concentration of pulse, paleness of the mucous surfaces, and diminution of secretions, announce the alteration in the quantity and composition of the blood. These are identical effects with those of general bleeding. Why, then, bring about slowly a state of things which we should tremble at causing with greater prompitude?" It might be said in reply, that it is not these effects which the physician deprecates, so much as a sudden general prostration and loss of balance between the heart and capillaries, which are occasionally caused by injudicious general bleeding.

The author next adverts to the exalted sensibility of the digestive canal, caused by long witholding food, and the consequent inability, after a while, to tolerate it in a common, or even reduced, quantity.

A caution is given to the surgeon not to be too prodigal of the blood of a patient suffering from wounds or fractures, since it has been seen that the wounds of animals subjected to prolonged abstinence cicatrized very imperfectly.

A rigid diet is more especially of dangerous tendency in cases in which there is a purulent cavity in any part of the body, or a suppurating wound of a bad character. The first effects of fasting are, as already stated, a diminution in the quantity of blood, and an increase in that of the lymph; that is to say, a very accelerated absorption—of course an absorption of the foreign and purulent matters from the sources above indicated. Among numerous other examples, the author cites the cases given by M. Andral; in one of which, a woman with chronic nephritis, the thoracic canal was found full of pus, and, some time before death, there had been *marasmus* and *hectic* fever: in two other women dead of *cancer* of the uterus, and the pelvis of whom contained putrid matter, and many cancerous masses, the thoracic canal held a puriform fluid, and a matter analogous to the cancerous masses. Instances are recorded by MM. Vallerand de la Fosse, Velpeau, and Bouillaud of encephaloid and cancerous matters in the veins. Dupuytren and Magendie furnish similar cases.

The two last chapters of the long and interesting paper of Dr. Collard de Martigny, are on the *functions of the lymphatic system*, and on the temperament characterized by the predominance of this system. These have been noticed in their proper place, under the physiological head.

On the Influence of Mercury on the Functions of the Uterus. By Alexander Colson, M. D., formerly House Surgeon of the Hôpital des Venerenis, &c.

The functions of the uterus, both in a state of menstruation and impregnation, are often disturbed by strong medicinal agents; and as mercury is used in this country to a greater extent than any other, excepting, perhaps, America, it may be interesting to enquire, what are the effects of this method on the uterine functions. Such enquiry can best be prosecuted in a Lock Hospital; and it is to this subject Dr. Colson has directed his attention.

The uterine derangements produced by mercury, he observes, are, mænorrhagia, amenorrhœa, and abortion. These effects he illustrates by a series of cases; one or two in each class we shall briefly state.

1. *Mænorrhagia.* A young woman, eighteen years of age, was received into hospital on the 17th October, for the cure of vegetations about the labia. She had been regular in her menses for four years previously. She was put on the use of Van Sweiten's liquor, (solution of oxymuriate of mercury) and eight days afterwards complained of pains in the abdomen, but especially in the loins and hypogastrium. The menses came on eight days in advance, and continued to flow during more than two months that she remained in hospital. The mercury had no effect on the vegitations. They were excised, and eight days afterwards the patient was discharged cured. Four or five other cases are detailed, showing the mænorrhagic influence of mercury; but the above is a sufficient illustration.

2. *Amenorrhœa.* C. Virginie, aged nineteen years, had contracted a syphilitic complaint—three months after, she went on the town. She entered the Venereal Hospital, and was put on the use of oxymuriate, which affected her mouth. Hitherto she had been regular in her courses; but now they stopped, and continued so all the time she was in the hospital. Two applications of leeches to the vulva were made in vain, as well as sinapisms, pediluvia, &c. She continued nearly three months in hospital, and left it in a state of amenorrhœa and general bad health, though the syphilitic complaint was cured. In about six weeks after she left the hospital, the menses reappeared. Six other cases of a similar kind are detailed by the author.

3. *Abortion.* A female, aged twenty-four years, six months pregnant, was received into the hospital in the month of October, for the cure of gonorrhœa. She was subjected to *mercurial frictions!* At the end of a fortnight of this treatment, she complained that she no longer felt the motions of the child, which previously were very distinct. She also complained of a sense of weight at the lower part of the abomen, and in the groins. This state continued three or four days, and ended in the abortion of a fœtus dead, and apparently of about seven months.—*Archives.*

This case is followed by five others, where the premature expulsion of the fœtus was reasonably referable to the exhibition of mercury. The author remarks, that miscarriages are very common in the Venereal Hospital of Paris, though this accident is usually attributed to the syphilitic complaint, and not to the mercury employed for its cure. Dr. C. is of a different opinion, and attributes the abortions to the mercury. We do not deem it necessary to enter into the reasonings adduced by our author, respecting the modus agendi of mercury on the fœtus. The facts are of more value than the arguments; and as far as these facts go, (and they are not very few in number,) they offer fair testimony of the injurious effects of mercury on the functions of the uterus. How far the particular mode of administration in the Parisian hospitals may increase these bad effects of mercury, we are not able to determine, but this short notice of a lengthy memoir may convey some useful precautionary hints to the English practitioner.—*Medico-Chirurgical Review.*

On small Doses of Oil of Turpentine for the Cure of Sciatica, and other Neuralgiæ. By M. Martinet, M. D.—The employment of terebinthinates, in the affections of the nerves, is of very ancient date; but it is only in modern times that the essential oil of turpentine has been fairly put to the test of experiment in the neuralgiæ, of which sciatica is one of the most obstinate and intractable. M. Martinet has lately given an exposition of the results of his experience, in seventy cases of *sciatica*, or other severe neuralgiæ of the extremities, where the oil of turpentine was employed, but in small doses—namely, about a fluid drachm in the twenty-four hours, and taken at three different times. In this way, it seldom acted on the bowels; but generally produced a sense of heat in the stomach, and throughout the whole line of the intestinal canal, and occasional perspiration. A similar sensation was usually experienced in the nerve affected. The vehicle of exhibition was honey syrup, or, what was the best of all, a mixture of syrup and calcinated magnesia. The yolk of an egg is also a good ingredient in the vehicle. Where the digestive organs were very irritible, a few drops of laudanum were added. The modus agendi of turpentine in the cure of sciatica, or of any of the neuralgiæ, is quite unknown, and, therefore, we shall not waste time in discussing that point. The *resumée* of our our author's experience with this remedy is as follows:

Of seventy patients who labored under sciatica or other severe neuralgiæ of the extremities, fifty-eight were cured—namely, three by frictions, and fifty-five by the internal administration of the turpentine. Ten experienced only a more or less durable relief—and five derived no benefit whatever from the medicine. Two out of these last labored under disease of the hip joint, under which they ultimately sank. Of these seventy cases, forty were acute, and thirty chronic. Of the forty acute cases, thirty-four were cured, five were relieved, and one received no benefit. Of the thirty chronic cases, twenty-four were cured, two were relieved, and four remained without any mitigation of their complaints. Of the fifty-eight patients who were completely cured, thirty-four were cured in

less than six days, twenty-two within twelve days, and three within six weeks. Of these fifty-eight cures, forty-eight were cases of sciatica, two of which were cured by frictions. Three were crural neuralgiæ, four were brachial, and three facial. In the ten cases which were only relieved (all of which were cases of sciatica) the treatment was suspended after the second day. In twenty-one cases, heat was felt along the tract of the nerve, and in the limb affected; and nineteen of these were completely cured. In eighteen cases, heat was felt in the stomach and bowels. Three were affected with vomiting, but these had taken a larger dose than usual of the oil. Three had diarrhœa and colic. In five instances, the urine was augmented—four had duysury or strangury. In ten instances, the perspiration was augmented. In one case, a degree of intoxication was produced—and in two others, a pruritus was experienced over the body.—*Revue Medicale.*

PHARMACY.

Preparation of Iodine. By M. Souberan.—The following is the process recommended by M. Souberan, by which he has obtained as much as one eightieth part of iodine from mother liquors, that would yield none by the ordinary process. The mother liquors from the soda works, are to be diluted with four or five times their weight of water, and solution of sulphate of copper added, until precipitation ceases. The deposit will consist of iodine of copper and sulphate of lime, and is to be separated. Large iron filings, or turnings, are then to be put into the liquid and agitated, until all smell of iodine has disappeared, by which process the remaining portion of iodine will separate, as an iodide of copper, mixed with metallic copper and the iron turnings, but easily separated by washing over. These two precipitates are then to be acted upon separately, in one of the following ways: 1. The iodide is to be mixed with two or three times its weight of peroxide of manganese, and a sufficient quantity of concentrated sulphuric acid, and then distilled, when all the iodine will rise, with some aqueous vapor; or 2. The mixture of iodide and oxide of manganese is to be heated in a retort to a high temperature, when pure iodine will come over; the residue is pulverulent, and can easily be extracted without breaking the vessel.—*Ann. des Mines*, N. S. iii. 102.

Sugar of Liquorice—Glycyrrhiza Glabra.—The peculiar principle in the root of this plant has been long known. Doberuner and Robiquet have given processes for its separation. The following is by M. Berzelius. The cut root is to be infused in boiling water; the cold filtered infusion is to have sulphuric acid added in small quantities, until no further precipitate is formed. The precipitate is a compound of the acid with the saccharine matter, and is to be washed at first with acidulated cold water, and then with pure water, until no free acid appears. The precipitate is to be digested

with alcohol, which leaves certain impurities, and then pulverized carbonate of potash, or soda, is to be added to the solution, until it is neutral; the clear liquor is to be decanted and evaporated. It is desirable to have a small excess of acid present, for which purpose put a little of the alcoholic liquor on one side, to be added at last to the neutral portion, and then leave the whole at rest, that the sulphate of potash may separate before the evaporation is effected.

The saccharine principle is a transparent yellow mass breaking like amber. Being heated, it melts and burns with a bright flame and much smoke. In powder, it burns like resin, or lycopodium. It does not change in the air. Its aqueous solution is precipitated by *all the acids*, and the more completely, the stronger is the solution. The precipitates have no acid taste, but are sweet; they disolve in water, and gelatinize upon cooling, if the solutions are strong.

This substance also combines readily with bases forming soluble neutral solutions; those with baryta and lime are not precipitated by carbonic acid. This principle forms insoluble compounds, with metallic acids, and many metallic oxides. It combines, also, with many salts, causing their precipitation in some cases.

The saccharine principle of the root of wild liquorice *(polypodium vulgare)* is altogether different in its qualities from the above substance.—*London Quarterly Journal.*

Substitute for the Sulphate of Quinia.—Bartholomea Rigatelli, a chemist of Verona, says he has discovered a substance which may be used instead of the sulphate of quinia; but the notice given of it is so imperfect, that it would not be worth attention, except that it comes from a committee, appointed by the Academy of Verona, and may therefore be supposed to have some foundation. The committee report, that the saline substance spoken of is obtained from an indigenous plant, common to all Europe; that it is obtained in considerable quantities by a simple process; that it consists of an acid, in union with a vegetable alkali; and that it contains nothing which can injure the health. The salt is friable, of an earthy appearance, and brick red color, having a more astringent and bitter taste than the sulphate of quinia; its odor is slightly vegetable, but scarcely perceptible. When pulverized, the powder is white, and very soluble in water. Multiplied observations have proved, that it may be successfully used in place of sulphate of quinia, in every case where the latter has been found advantageous. —*Bull. Univ.* C. xiv. 101.

Preparation of Gallic Acid.—The following is M. Le Roger's method. Gall nuts are to be exhausted by repeated decoctions, the liquid obtained concentrated and precipitated by a solution of jelly; the tannin thus rendered insoluble, is to be filtered out; very pure animal charcoal is to be added to the liquid, and boiled with it for eight or ten minutes, and the whole filtered, when the liquid, on cooling, will give pure white and silky crystals of gallic acid, amounting, when the best galls are used, to one fourth of their weight.—*Mem. de Geneve.*

Dr. D.L Rogers' *Instrument for Fistula in Ano.*

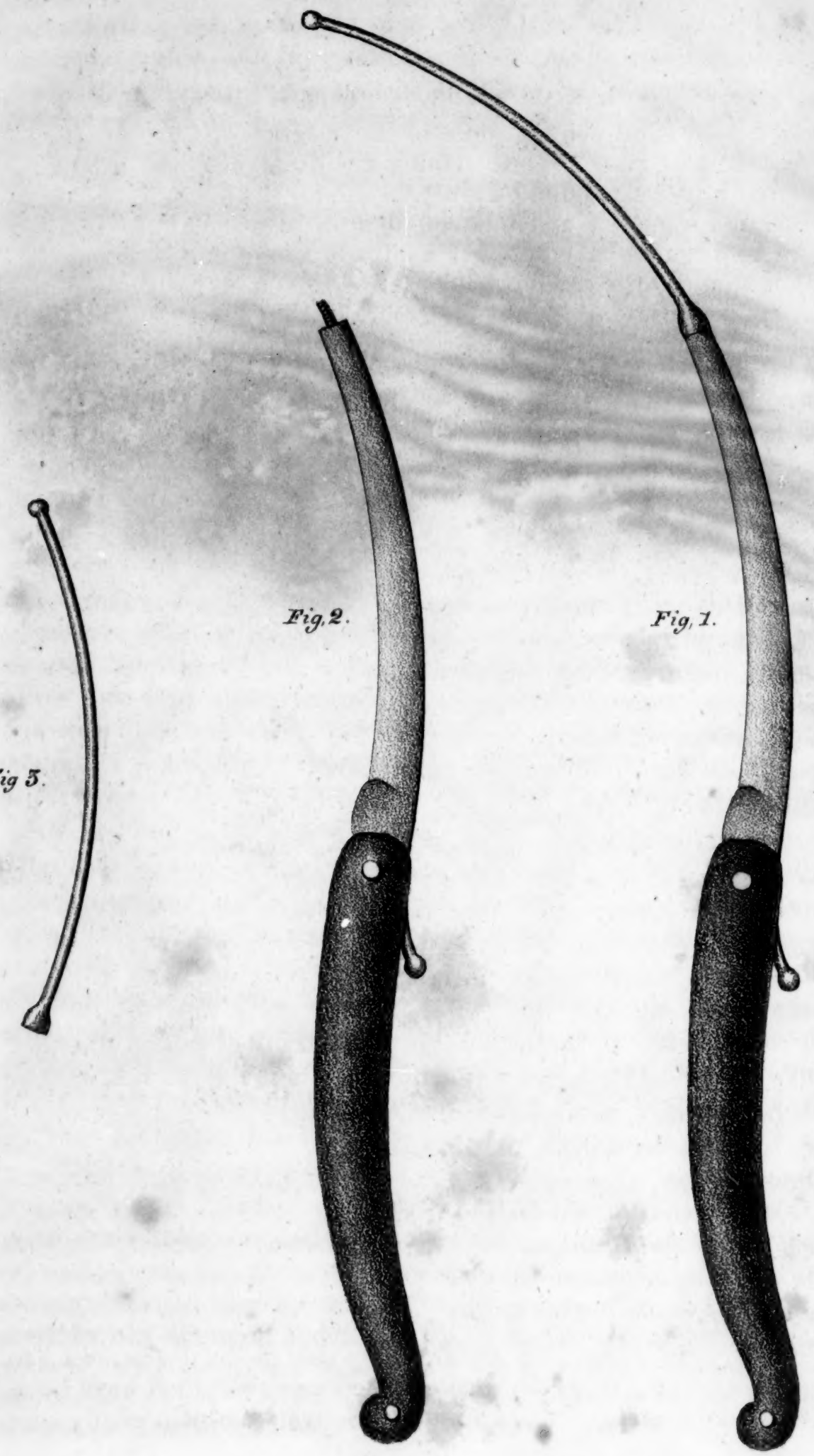


Fig 3.

Fig, 2.

Fig, 1.

Published by Charles S. Francis, New-York.

P. Desobry's Lith.

DOMESTIC.

A New Instrument for the Operation in Fistula in Ano. By DAVID L. ROGERS, M. D., of New York.—(With a Plate.)

To the Editor of the New York Medical and Physical Journal.

Dear Sir—I send you the plate of an instrument for the operation of fistula in ano. While visiting the great hospital at Milan, I observed a probe pointed bistoury, in use for the dilatation of deep and irregular sinuses; and believing that an instrument of a similar construction might be employed with advantage in operations for fistula in ano, I have modified it so far as to suit it for that operation. The operation by the common bistoury is attended with many inconveniences, particularly when the sinus extends to a considerable distance up the rectum. Although the communication between the sinus and gut may readily be found with a probe, yet every surgeon will acknowledge the difficulty of following the track of the sinus with the sharp pointed bistoury. Another difficulty will occur to the surgeon after the point of the bistoury has entered the intestine, in being obliged to draw it out under the nail of his fore finger, by which the finger is frequently wounded, or it slips from the finger and wounds the intestine. These accidents have frequently occurred to me in performing this operation. The instrument which I offer to the profession, I believe, will obviate the difficulties which attend the operation by the common bistoury. This instrument consists of a common bistoury, the blade of which terminates in a small screw, (see fig. 2,) to which a flexible probe is attached (see fig. 3) of two inches in length. This, when screwed on the bistoury, completes the instrument, (see fig. 1.) I have considered the attachment of the probe by a screw as the best plan, inasmuch as it renders the instrument more portable, and different sized probes may be attached, according to circumstances.

The advantages of this instrument over the one in common use are—first, that the probe will follow the track of the sinus, and can more readily be passed through the opening in the rectum—secondly, it may easily be laid hold of by the fore finger, and drawn out at the anus, which its flexibility will admit of—and thirdly, the surgeon may take a firm hold of the instrument, so that by drawing it forward, it will cut its way out.

With much respect, I am yours, &c.

DAVID L. ROGERS.

No. 19 Market street, June 30, 1829.

N. B. Messrs. Rose & Sellers, of this city, have made me a very neat instrument of this description.

On the Management of Collared Cases in Midwifery.—It is a fact that many discoveries relating to the medical sciences are springing up in Europe, and promulgated as new, which have been known and taught for years in this country; and it is really sur-

prizing, or rather amusing, to see with what avidity they are seized by American journalists and puffed off as something important, merely because they came from the old world. Among others is the "*new* method" proposed by Mr. Smith, of Bideford, and first published in the Edinburgh Medical and Surgical Journal, for the management of those obstetrical cases in which the funis is wound around the neck. The same "new method" has since gone the round of all the American medical journals. In the winter of 1812, and how much sooner I know not, professor Hosack publicly taught the very method recommended by Mr. Smith; and from that time the writer of this notice has pursued the plan, as others of his class unquestionably have done. In fact, the very same management is practised commonly, as far as I can learn, as a matter of ordinary routine, and is, perhaps, universal in this country, as it would naturally suggest itself to every ingenious mind. Instead of dividing the funis, or of attempting to slip it over the child's head, Mr. Smith tells us that we must first ascertain that portion of the cord which is attached to the placenta, which is easily learned, because this portion is loose and dilatable, while that part attached to the fœtus is tense and unyielding. This being done, the next step is to draw down as much of the placental portion as can be obtained, and at the next pain the finger of each hand must be introduced under the cord and the fold or noose sufficiently dilated to admit the child's shoulders to pass through it; then, by directing the child's head and shoulders anteriorly towards its own lower extremities in a looplike shape, the whole very readily slips through the turn of the cord. The passage of the funis over the shoulders instead of over the head requires four inches less of extension, and, hence, reduces the difficulty of the delivery. Those who have never practised this method of procedure will find no difficulty when the collar is single, but in cases of two or more turns of the cord they will find it easier to press the child back a little in the recess of the pain and slip the last turn of the placental portion of the cord over the head, pressing this closely to the breast. J. F.

Dow's Family Physic.—A nostrum under this title is now vending, and is said to be a composition invented or obtained by Mr. Lorenzo Dow, an eccentric methodist minister. It comes in bottles containing about lbjss., with directions to be taken every other morning in doses of a table spoonful every hour until it operates as a cathartic, each spoonful to be followed by a cup of warm tea. The medicine is certainly doing considerable good, and requires only the discriminating eye of a physician to render it useful. From a hasty analysis each bottle appears to contain—

Sulphas sodæ, ʒiv.
Sulphas mag., ʒii.
Nitric acid, ʒiij.

Of this mixture I find an ordinary wine glass full to operate kindly as a cathartic. It has a very salutary effect on chronic hepatic derangement, colds of long standing, and bilious diarrhœas. J. F.

Hope's Formula.—Two years have now elapsed since this preparation of medicine was first introduced into this country for the cure of the dysentery. Its formula runs thus:

"℞ Acid nitrosi, ʒi.
Mist. camphorat, ℥viij. misce et
Adde Tinct. opii, 40 gtt."

"A small addition of the syrup of red poppies improves not only the appearance of the mixture, but in some instances it has appeared to increase its effects."

"In chronic dysentery, the dose of two ounces, three times a day, is quite sufficient; the remedy is grateful to the taste, abates thirst, soon removes the intensity of pain, and, in general, procures a speedy and permanent relief. No previous preparation is requisite for taking it, nor any other care while taking it, except the keeping of the hands and feet warm, preserving the body as much as possible from exposure to extreme cold, or currents of air, and making use of warm barley water, or thin gruel, and a diet of sago or tapioca."

The *nitric* acid was tried by Mr. Hope, but it did not produce the salutary effects witnessed from the *nitrous*.

Having, for two years, given the "nitrous acid mixture" a fair trial, we cannot claim for it any reputation in dysentery, unless it has degenerated into a chronic diarrhœa, for which it is an admirable remedy, as it also is in all cases of cholera infantum. Having substituted ʒviij. for ℥viij., we find a tea spoonful given to a child two years old, two or three times a day, in a quantity of well sweetened elm, flax, or quince seed tea, or in mucilage of gum arabic or mallows, to have a most happy effect. Of Mr. Hope's hundreds of cases in which it never failed, we are led to suspect that few were more than diarrhœas, with the severe forms of which he probably confounded dysentery. J. F.

QUARTERLY BIBLIOGRAPHICAL NOTICES.

Medical and Literary Annals. By Professor Hecker, at Berlin.

We have received the last two numbers of this valuable journal, published monthly, at Berlin, by professor Hecker, assisted by a society of professors of medicine in Germany. The first of these numbers, for October, 1828, contains several reviews of newly published works, and a variety of original articles.

The first number is on the connexion between the diseases of old age and of childhood, by Dr. F. Jahn, of Meiningen. (Senes bis pueri)—An original article. The author first enquires into the sensible life of old men and children. Young children pay little attention to light and sound, and old men see and hear but little; their taste and faculty of smelling (Magendie, Rudolphi) is equally imperfect; and, as Haller observes, old men and children are both fond of sweet things. He then examines the other systems. As the circulation in the veins is more developed than in the arteries, the

systema venæ portarum is in old men of the greatest importance, and the circulation of the fœtus and neonatus is almost entirely venous. The muscular system in both of these ages is equally feeble, which is particularly observable in the weakness of the sphincters. The kidneys are in both of these ages very active, the digestion weak, and the genital system equally imperfect.

The author traces in this way the most interesting analogies, on a large scale, and then tries to show, that somehow the diseases of children return in old age.

1. He examines the cerebral system, comparing the hydrocephalus infantum to the hydrocephalus chronicus senilis; the hydrocephalus acutus infantum, with the apoplexia serosa senilis, &c. He likewise mentions the blepharophthalmia neonatorum, and the lippitudo senilis.

2. The author then turns his attention to the chylopoietic system, and mentions first icterus, to which complaint both ages are so often and equally liable. Atrophia infantum, and marasmus senilis, are next considered. The polypionia involutionis, the formation of superabundance of fat in old age, which sometimes likewise occurs in children, as polypionia infantum, and the helminthiasis infantum, frequently return in old age.

3. The uropoietic organs are, in both ages, liable to the same diseases, particularly to the formation of stones, and to the enuria renalis.

4. As to the genital system, both old women and young girls suffer frequently from fluor albus.

5. The system of respiration. Young children and old men are particularly liable to apoplectic fits and asthma.

6. The condition of the skin in both ages, constitutes the last object of this interesting enquiry. The author observes that in both these ages this organ is the most liable to disease, evinced by erysipelas neonatorum, and erysipelas pedum senilis; pemphigus neonatorum and senilis, herpes, &c. The glandular organs, which, in childhood, are subject to scrofula, suffer in old age frequently, from cancerous affection.

At the end of this interesting essay, of which we can only give a short notice, the author mentions a theorema of professor Meckel. The power which operates on human beings is intimately connected, if not the same, with that power which rules the universe, in creating in the opposite poles similar, although not equal, formations.

The third article is a critique on a newly published work, entitled "Enquiries into the moral and organic causes of mental derangement and moral corruption, for the perusal of medical men and lawyers—by Dr. F. Groos, first physician in the lunatic asylum at Heidelberg." This work is highly approved of, as well as the following, by the same author, which is likewise criticised: "Fragmenta psychiatrica."

The fifth article is a review of the following works:

1. "Remarks on the angina faucium mercurialis, as a complaint which follows the venereal disease, &c.—by Dr. C. G. T. Oppert, of

the University of Berlin." The author endeavors to distinguish the affections of the throat caused by mercury, from the syphilitic affections of those parts. He mentions, as characteristical symptoms of the angina mercurialis, a straining feeling in the palate and œsophagus, which often appears several months after the removal of all syphilitic complaints; difficulty in swallowing; hoarseness, particularly in the morning and evening; fatigue, and even pains, after talking, and these pains particularly in the nose, back part of the head, and along the eustachian tube in the ear. The uvula, palatum molle, tonsils, and opening of the eustachian tube, have a dark reddish color, and are never swollen, with the exception of one or the other of the tonsils. In the tonsils there appear sometimes small ulcers, similar to the venereal kind, in consequence of a cold, or after the use of spirits, or much smoking of tobacco; but they change their place of appearance frequently, which the syphilitic ulcers never do, while the latter enlarge themselves likewise faster, and are rather of a light reddish color. As remedies, he mentions warm clothing, flannel, sarsaparilla, Peruvian bark, guaiac, and particularly the nitric acid.

2. "The advantage and disadvantage of bleeding in diseases—by Dr. A. F. Fischer, of Dresden." A very able work, highly approved of.

3. "The abuse of bleeding, condemned by the authority of the greatest practitioners, and by reason and experience; for the perusal of young practitioners—by Dr. L. Angeli—translated from the Italian into German, with notes, by Dr. Widemann." The writer of the review observes, that this work is not so much calculated for Germany as for other countries, in which the practice of bleeding is more indiscriminately employed.

No. VIII. "A review of the Journal of Midwifery and Practical Medicine—by W. H. Niemeyer, professor of medicine and midwifery, in the University of Halle. First number. Halle, 1828." This number treats chiefly of midwifery at Halle, and of the system of teaching pursued there; and then he goes on to describe the general treatment, and particularly the diet necessary during gravidity, childbed, &c. As to the removal of the placenta, the author observes, that a placenta filled with blood is easier removed from the uterus, than one of which the blood has been mostly discharged, and, for this reason, he gives the advice to apply always two ligatures to the umbilical string.

The third essay of this journal contains several highly interesting treatises on midwifery, and diseases of females and children. There are some remarks on the effects of the pains during childbed on the mind, and it ends with a case in which a woman had truly prognosticated the fatal end of her tenth delivery, while all the preceding ones had been perfectly easy and natural. To this follows a case of microcephalus, and other cases in midwifery of different kinds, and of great interest.

The ninth article contains a review of the following work:—"Manual for the knowledge of books on medicine during the old time, and for the study of Greek, Latin, and Arabian medical writers,

&c.—by Dr. L. Choulant, professor of medicine, &c. at Dresden. Leipzic, 1828." This work, highly valuable for the study of the old medical writers, gives us a proof of the deep study and perseverance of some of the German professors. The work contains, in four sections, a list of the Greek, Latin, and Arabian authors, and also their collections and dictionaries. The first section commences with an introduction on the origin, course, and spirit of Greek medical literature. The author then proceeds to the different authors, and discusses the merits of their several works. 1. Hippocrates and his works; 2. Polybius; 3. Diocles of Carystas; 4. Platon; 5. Aristotle; 6. Theophrastus of Eresus; 7. Nicander; 8. Asklepiades from Prusa; 9. Andromachus, senior; 10. Erolian Dioscorides; 11. Aretæus. 12. Cassius; 13. Rufus of Ephesus; 14. Soranus of Ephesus; 15. Xenocrates; 16. Marcellus of Sida; 17. Claudius Galenus; 18. Antyllus; 19. Oribasius; 20. Alexander of Aphrodisias, and many others, viz. Nemesius, Palladius, Ætius, Alexander Trallianus, Theophilus Protospatharius, Paulus Ægineta, Meletius, Mercurius Monachus, Theophanes Nonnus, Simeon, Seth, Michael Psellus, Synesius, Joannes Actuarius, Demetrius Pepagonus, Nicolaus Myrepsus.

The second section treats of Latin authors, viz. Celsus, Scribonius, Largus Designatius, Cælius Aurelianus, A. Serenus Samonicus, Lucius Apulejus Barbarus, Antonius Musa, Vindicianus, Theodor Griscianus or Octavius Horatianus, Plinius Valerianus, Sextus Glacitus Gaperiensis, Marcellus Empiricus, Vegetius, Macer Floridus, Constantinus Afer.

The third section treats of Arabian authors, viz. Jahia Ebn Serapion, Honain Ebn Ishak, Jakub Ben Ishak, Ben Alsabah Abu Jusuf Alchind, Aben Guefit, Abdorrahman, Muhammad Ben Zachariah Abu Bekr Arrasi, Ali Ben Abbas, Ishak Ben Soleiman, Abu Ali Alhossain Ebn Abd'alla Ebn Sinah, Ebn Serapion, Jahiah Ben Dschesla, Chalaf Ebn Abbas Abu'l Kasem Alzahravi, Masarvaih Ben Hamech, Abu Mervan Ebn Zohar, Abu'l Walid Muhammad Ben Ahmad Ebn Roschd, Rabbi Moscheh Ben Maimon, Abdollatif Ben Jusuf Ben Muhammad, Abd'alla Ben Ahmad Dhiaeldin Ebn Albeithahr.

The fourth section contains a list of the different dictionaries, and the whole of the work proves the most perfect knowledge and deep study of medical literature, and may justly be considered classical.

No. X. contains an account of several new inaugural dissertations, published by young graduates of the University of Berlin.

We proceed now to the number for November. The first article is a continuation of an account of the epidemics prevalent in the Netherlands during the fall of 1826.

No. II. A review of a newly published work, entitled "The Diseases of the nerves and of the mind, by Dr. J. H. Feurstein. Leipzig, 1828."

No. III. A review of the German translation of Dr. Th. R. Beck's Medical Jurisprudence. The writer of the review speaks in lofty terms of the merits of Dr. Beck in the composition of this learned work. He makes particular mention of the sixth chapter, the

eighth chapter, by Dr. John B. Beck, of New York, the tenth, the twelfth, and, also, the last chapter of the second volume.

The eighth article is a review of the Clinical Practice of Dr. J. R. Bischoff, Professor of Medicine in the Austrian Academy of Vienna. Vienna, 1829. This academy was instituted chiefly for the education of young physicians and surgeons intended for the Austrian army and the hospitals connected with it, as soldiers particularly are treated by them. Many interesting cases are mentioned in this account of the author's clinical practice.

The ninth article contains different short accounts of practical cases.

The journal gives decisive evidences of the patient and persevering attention, and the unabated zeal, with which our German brethren cultivate medical science. J. L. W.

Anales de Ciencias, Agricultura, Comercio, y Artes. Por D. Ramon de la Sagra. Habana; desde Julio de 1827, hasta Febrario de 1829.

Annals of Science, Agriculture, Commerce, and the Arts. By Don Ramon de la Sagra. Havana; from July, 1827, to February, 1829. Published monthly.

The extention of scientific research to the West India islands, even to those which are under the sway of despotic governments, is calculated to awaken the most delightful anticipations of the general and progressive improvement in the moral and intellectual condition of the inhabitants of those interesting regions. Intimately connected with the natural and exact sciences, medicine cannot fail to derive from their successful cultivation, important accessions to its stores of knowledge, and its means of usefulness. And nowhere is such assistance likely to prove more beneficial than in tropical climes, the diseases of which are so frequently endued with severe and fatal forms. Cuba offers great facilities for the pursuit of this object, in the extent and fertility of her soil, and the variety and value of her agriculture and commerce. The annals before us have been undertaken with the laudable view of diffusing knowledge throughout the population of the island, and eliciting from them, in return, all possible information respecting its resources and natural history. Among the communications, which are generally of an important character, are several on medical subjects. From these we have made the following abstracts, to gratify the curiosity of the American reader. We shall continue them in a future number.

On the 15th of September, 1827, Dr. D. Francisco Alonso y Fernandez opened a college of medical surgery, by an introductory lecture, delivered in the Anatomical Museum of Havana. The purport of the address was a defence of surgery against the unfounded prejudices which have been but too popular against it, and have long and successfully aimed at degrading it below the rank of a science. His views of the subject are liberal and just, and the professor gained deserved applause. In Dr. Fernandez, many of our readers will recognize a highly respected honorary member of

the Medical Society of New York. As an evidence of the zeal with which this learned physician cultivates medical science, we may notice the fact that the account of Civiale's lithonthriptor had no sooner reached the island of Cuba, than Dr. Fernandez availed himself of the first opportunity of having the operation performed on two dead subjects properly prepared. The experiment was completely successful, and several patients have consented to submit to the new method of operating for the stone.

Extraordinary Case of Premature Puberty. In the number for September, 1827, is related by the editor, an extraordinary instance of premature puberty in a black girl. She was born on the 6th of July, 1821. From the moment of its birth, the breasts of the child were observed to be very strongly developed, and not long after, a slight sanguineous flux occurred from its genitals. This evacuation was occasionally repeated after different intervals, but at the end of the first year it assumed a character of monthly regularity in its returns, which attracted very general attention. Dentition was performed at the ordinary period. The breasts continued to enlarge, and hair began to grow even in the axillæ. The narrator of the case first saw her when she was thirty-two months old: her height was then three feet and ten inches. Her feet were slender, her trunk, head, and extremities admirably well proportioned. The genitals and mammæ were as fully expanded as they are ordinarily at thirteen years of age, and her frame in general seemed to have undergone a similar development. With a view to ascertain the condition of her moral inclinations, various attempts have been made, but they have not as yet been successful. Her voice is grave and sonorous. Her name is Isabel, and she is a slave to Don Carlos Pedro, in Havana.

Traité Elementaire de Matiere Medicale. Par F. S. Ratier, Docteur en Medicine, &c. En deux tomes. Paris, 1829.

Elementary Treatise of Materia Medica. By F. S. Ratier, M. D., &c. Paris, 1829. Two volumes 8vo., pp. 456—351.

The author of these volumes is favorably known to the profession, by his very excellent descriptions of the hospitals of Paris. The present work is a faithful transcript of his own observations, added to those of the writers who have preceded him in the same arduous labor. The articles are treated of alphabetically, and many of them very minutely. In our next number we shall touch on those which are the most novel and interesting.

An Account of some of the most Important Diseases peculiar to Women. By Robert Gooch, M. D. London, 1829. 8vo. pp. 432.

This interesting volume shall be reviewed in our next.

Memoir of Edward A. Holyoke, M. D., L. L. D. Prepared in compliance with a vote of the Essex South District Medical Society, and published at their request. Boston, 1829. 8vo., pp. 80.

We are indebted to its excellent author, Dr. A. L. Peirson, of Salem, fer a copy of this interesting memoir. It is written in a

chaste and appropriate style, and comments in just and unexaggerated terms the unassuming and practical virtues, the professional industry and scientific attainments, and the pure and useful life, of its lamented subject. To the physician, the life of Dr. Holyoke is fraught with intense interest. The most ardent and incessant occupation of mind and body, the temperate indulgence in all the blessings of this life, and a never failing zeal for the improvement of medicine, were the characteristics of this distinguished centenarian, preserved unsullied by the touch of time, and all its numerous and trying vicissitudes.

Anatomico-Surgical Drawings and Descriptions of all the Surgical Operations according to the most approved Methods. By L. J. Von Bierkowsky. Translated from the German. In two volumes, and 570 drawings, on 58 folio plates.

Messrs. G. & C. & H. Carvill propose to publish this work within the ensuing year, and have issued their prospectus in a neat pamphlet form, accompanied by a specimen of the translation. Judging from this latter, we are inclined to believe, that it will be every way worthy of the high character which this work deservedly enjoys in the estimation of the chirurgical world. The work will be issued in five numbers, at six dollars each, payable in advance.

MISCELLANEOUS NOTICES.

University of the State of New York—College of Physicians and Surgeons.—The twenty-third session of the College will commence on the first Monday of November next; after which the several courses of instruction will be continued by the respective professors, viz.

John Augustine Smith, M. D.—*On Anatomy and Physiology, daily.*

Alexander H. Stevens, M. D.—*Principles of Surgery and Clinical Practice of Surgery, daily.*

Joseph M. Smith, M. D.—*Theory and Practice of Physic and Clinical Medicine, daily.*

Edward Delafield, M. D.—*Obstetrics, and Diseases of Women and Children, four times a week.*

John B. Beck, M. D.—*Materia Medica and Medical Jurisprudence, five times a week.*

John Torrey, M. D.—*Chemistry and Botany, daily.*

Demonstrations of special and surgical anatomy will be given daily, without charge, by John R. Rhinelander, M. D.

Students will enjoy, as heretofore, every facility for practical anatomy. The extensive Anatomical Museum and the Dissecting Room will be open every day. Obstetrical cases will be furnished to students under the direction of the professor of that branch.

The students will have daily opportunities of witnessing the medical and surgical treatment and operations of the New York Hos-

pital and Eye Infirmary; to the latter of which the directors have granted gratuitous admission to the students of this University during the session of the college. The professor of the theory and practice of physic will deliver clinical lectures gratuitously at the New York Hospital. Attendance on two courses of any professor entitles the student to free admission afterwards.

In order to graduation, the candidates must have attained the age twenty-one years—studied medicine three years—and attended two full courses of lectures at some legally incorporated medical college, the latter course at this University. He must also be provided with the requisite credentials of his age, term of study, and previous attendance on lectures.

The fee for each course of lectures is $15, excepting those of the anatomical and chemical professors, each of which is $20.

The matriculation fee is $5—graduation fee $25. Suitable board and lodging may be had in this city for $2.50 to $3 per week.

The trustees renew the expression of their obligation to the regents of the University and to the legislature, for the continued care which they have manifested for the science of medicine and for the medical institutions of this state.

By order of the board of trustees,

JOHN WATTS, Jr., M. D., *President.*
NICOLL H. DERING, M. D., *Registrar.*

New York, August 4, 1829.

University of the State of New York—College of Pysicians and Surgeons, Western District, (Herkimer county.)—The lectures commence on the first Tuesday of October, and will be continued for sixteen weeks.

WESTEL WILLOUGHBY, M. D.—*Midwifery.*
JAMES HADLEY, M. D.—*Chemistry and Materia Medica.*
JAMES McNAUGHTON, M. D.—*Anatomy and Physiology.*
T. ROMEYN BECK, M. D.—*Practice of Physic and Medical Jurisprudence.*
JOHN DELAMATER, M. D.—*Principles and Practice of Surgery.*

Ticket fees, $51.

Connected with the college is a stone edifice, four stories high, containing rooms for the accommodation of the students; and there are good rooms in the village for such as prefer private lodgings. The whole expense for a full course of all the lectures, including board, &c., need not exceed $100. The professor of anatomy has engaged Richard Fuller, A. M., to superintend the demonstrations in the rooms for practical anatomy; in which department it is expected that the means for improvement will be more ample than on any former occasion. JAMES HADLEY, *Register.*

Fairfield, August 1, 1829.

New York Hospital.—JOSEPH M. SMITH, M. D., professsor of the theory and practice of physic in the University of New York, has been elected one of the attending physicians to the New York Hospital, in the place of JOHN WATTS, Jr., M. D., resigned; and

JOHN WATTS, Jr., M. D. has been elected one of the consulting physicians to the same institution.

College of Pharmacy.—STEPHEN BROWN, M. D. has been elected professor of pharmacy to this institution.

Medical Society of the City and County of New York.—At the anniversary meeting of this Society, held on the 13th July, 1829, the following gentlemen were duly elected officers for the ensuing year:

Dr. SAMUEL W. MOORE, *President.*
Dr. DANIEL L. M. PEIXOTTO, *Vice President.*
Dr. BENJAMIN B. COIT, *Recording Secretary.*
Dr. FRANCIS O. DOUCET, *Corresponding Secretary.*
Dr. WILLIAM ROCKWELL, *Treasurer.*
Drs. R. K. HOFFMAN, E. G. LUDLOW, JNO. JAS. GRAVES, C. R. GILMAN, WM. HIBBARD, JUN., } *Censors.*

Medical Society of the County of Westchester, N. Y.—The annual meeting of the Medical Society of the county of Westchester, was held at Mount Pleasant, on Tuesday the 2d day of June, 1829, at which most of the physicians of the county were present. After the transaction of ordinary business, the members were called to partake of a good dinner, provided by Mr. H. Romer. On being seated at the table, the members of the Society unanimously requested the landlord to remove the decanters from the table, and beer and water were substituted. At the reassembling of the society in their room, for the farther transaction of business, the following resolutions were adopted:

Resolved, That this society view with pleasure the efforts making by benevolent individuals in different parts of our country, and especially by our medical brethren in their assemblies, for the suppression of intemperance.

Resolved, That an entire abstinence from the use of ardent spirits is necessary to the enjoyment of sound health.

Resolved, That in the opinion of this society, even the moderate use of ardent spirits is injurious, and renders the system more susceptible of contagious and other diseases.

Resolved, That the moderate use of ardent spirits is the exclusive procuring and exciting cause of many diseases, and that a variety of other diseases might be easily removed, were they not rendered incurable by habits of intemperance.

Resolved, That those who practise an entire abstinence, as far as our observation extends, enjoy better health, and make fewer calls for medical aid, than those who are in the habit of using ardent spirits.

Resolved, That in our opinion the human system is capable of enduring greater hardships, and of performing more labor, without the use of ardent spirits, than with it.

Resolved, That the present practice of retailing distilled liquors, is injurious to the health and morals of the community.

The following officers were then elected for the ensuing year:

Dr. MATSON SMITH, *President.*
Dr. WILLIAM HOFFMAN, *Vice President.*
Dr. DAVID PALMER, *Secretary.*
Dr. JOSHUA BOWRON, *Treasurer.*
Drs. G. C. BAILEY, A. W. GATES, D. PALMER, } *Censors.*
Dr. JAMES FOUNTAIN, *Delegate.*

Harvard University—Medical Lectures.—The medical lectures in Harvard University will begin in the Massachusetts Medical College, Mason street, Boston, the third Wednesday in October next, the 21st, at nine o'clock, A. M.

Dr. WARREN—*Anatomy and Surgery.*
Dr. WEBSTER—*Chemistry.*
Dr. CHANNING—*Midwifery and Medical Jurisprudence.*
Dr. BIGELOW—*Materia Medica.*
Dr. JACKSON—*Theory and Practice of Physic.*

Berkshire Medical Institution.—The annual course of lectures commences on the first Thursday of September, and continues fifteen weeks. Medical degrees are conferred at the close of the lectures in December, and the annual commencement of Williams College, with which this institution is connected. Gentlemen who have received the degree of M. D., fellows of the Massachusetts Medical Society, and those who have attended two full courses of lectures at any incorporated medical school, are admitted gratuitously, the matriculation fee and library ticket excepted. The requisites for an examination for a degree are, a good moral character, three years' study with a regular physician, an adequate knowledge of the Latin language, and attendance on two full courses of lectures, one of which must have been at this institution. The examination for medical degrees begins on the Wednesday of the week preceding the close of the lecture term. Dissertations must be lodged with the dean of the faculty, at least four weeks preceding commencement. The trustees have made ample provision for the accommodation of students, and are increasing the advantages for a thorough and complete medical education.

The lectures will be delivered by the following professors of their several branches, viz.

H. H. CHILDS, M. D.—*Theory and Practice of Physic.*
J. D. WELLS, M. D.—*Anatomy and Physiology.*
S. W. WILLIAMS, M. D.—*Medical Jurisprudence.*
S. WHITE, M. D. and S. P. WHITE, M. D.—*Theoretical and Operative Surgery.*
C. B. COVENTRY, M. D.—*Materia Medica and Pharmacy, and Obstetrics.*

C. Dewey, M. D.—*Chemistry, Botany, Mineralogy, and Natural Philosophy.*

New Hampshire Medical Institution.—The medical lectures at Dartmouth College, Hanover, N. H., will commence on Thursday, 27th August, and continue thirteen weeks.

R. D. Murray, M. D.—*Anatomy, Surgery, and Obstetrics.*

Daniel Oliver, M. D.—*Theory and Practice of Physic, Materia Medica, and Physiology.*

Benjamin Hale, A. M.—*Chemistry, Pharmacy, and Natural Philosophy.*

By the several Professors—*Lectures on Legal Medicine.*

Fever at Gibraltar.—The English and French governments have united with the local authorities at this place, in the laudable design of investigating the nature, causes, and best method of treatment of the extensive epidemic which lately desolated its population. The researches are said to be conducted with spirit and impartiality, and if so, will receive from the medical profession the utmost attention and consideration.

Trial for Libel.—Dr. Beatty, of Philadelphia, has been lately tried in the courts of that city, for an alleged libel against Dr. M'Clellan, professor of surgery in Jefferson College. The defendant was found guilty, and the damages awarded at $500. The account of the trial is shortly to appear in print, when we shall take a full notice of all its important features.

A New Journal at Baltimore.—Horatio G. Jamieson, M. D. has issued proposals for publishing a new journal to be entitled "The Medical Recorder."

☞ Into the note referring to Messrs. Carey, Lea, and Carey, in our last number, there crept a material error. The word "merit" was inserted instead of the words "credit and sale." The object of the article was to disclaim any impugnment, on our part, of the motives which actuated those gentlemen in their detention of the MS. referred to.

TO READERS AND CORRESPONDENTS.

COMMUNICATIONS have been received from the following gentlemen: Dr. WILLIAM BAYARD, of St. John's, N. B., through the politeness of Dr. THOMAS COCK; Dr. ANDERBACH, of New Orleans, through professor DELAFIELD; Dr. PIERCE, through professor JOHN B. BECK; also, from Dr. JOHN D. SUTPHEN, through professor C. E. PIERSON, Drs. PHILIP EDW. MILLEDOLER, F. O. DOUCET, JAMES FOUNTAIN, S. W. AVERY, R. K. HOFFMAN, ABM. L. COX, &c. &c.

It will be perceived, that several valuable foreign works on practical subjects are reviewed in this number, in anticipation of the English journals. This we shall be enabled to do hereafter with the greatest ease, now that the cause which retarded the appearance of the last and present numbers is removed.

Cheered by the encouragement and approbation which we have already received, we confidently cherish the hope that the NEW YORK MEDICAL AND PHYSICAL JOURNAL will prove to the profession, as prompt a vehicle as any of its numerous and able contemporaries, of the various and interesting information which is daily accumulating in the storehouses of medical learning abundantly scattered over every portion of the civilized world.

INDEX.

A

Page

Abortion, vesication useful in preventing 30
Absorption, cutaneous..... 393
Abstinence, effects of..... 473
Account of the most important diseases of women..... 486
Acetate of lead, Mr. Laidlaw on 460
Aloes, watery extract of..... 203
Amputation without ligature... 183
———— of the cervix uteri 184
Anatomico-surgical drawings.. 487
Anatomy, pathological contributions to..... 291
Aneurism, spontaneous cure of.....210, 434
Angina pectoris..... 293
Annals, medical and literary... 481
——— of science, agriculture, commerce, and the arts..... 485
Annual address by Dr. T. R. Beck..... 9
Antimony, tartarized, poisoning by..... 302
Arnott's elements of physics reviewed 129
Arracan, diseases of..... 91
Ascaris lumbricoides..... 209

B

Baltimore, new journal at..... 491
Baxter, John, M. D., his meteorological report..... 281
Beck, T. R., his annual address 9
————, his elements of medical jurisprudence..... 215
Belden Lewis, M.D., on abortion 30
Belladonna, smoked in phthisis 182
Bengal, diseases of..... 90
Bencoolen, diseases of..... 89
Berkshire medical institution.. 490
Bibliographical notices....215, 481
Blatchly, Cornelius C., on worms 209
Blisters in abortion..... 30
Blood, abstracted appearances of 404
———, circulation of..... 131

Page

Borax in cutaneous diseases... 469
Brain, size of..... 173
Breast, diseases of..... 372
Brown, Stephen, M.D., on small-pox..... 208

C

Cæsarean operation doubly successful 436
Calculus, lachrymal..... 176
Calcutta medical transactions.. 84
Camphor, use of..... 457
Carbon, crystals of..... 197
Carcinoma of the rectum..... 125
Carey, Lea, and Carey, Messrs., and Dr. Tessier, note respecting.....232, 492
Chemistry, elements of, reviewed 346
Chiococca anguisfuga..... 208
Cholera 176
Christy, Asa, M. D., on rhus vernix 21
Circulation of the blood..... 131
———————..... 169
Colin's manual for the stethoscope 144
Collared cases in midwifery.... 479
College of physicians, &c., New York 218, 487
————————, Fairfield 488
———————— 219
———— pharmacy.....220, 489
Colon, enlargement of..... 127
Contagion of typhus..... 104
Cooper, Sir Astley, on diseases of the breast..... 372
Correspondents, to readers and 492
Crystalline lens, reproduction of 392
Cutaneous diseases, borax in.. 469

D

Delirium tremens..... 312
Digestion, Wilson Philip on... 403
Diseases of the heart.....159, 369
———— of women, account of the most important..... 486

Page

Diseasse of India..... 84
Dispensary, New York City, report of..... 229
Doucet, F. O., M.D., on the imagination..... 46
Dow's, Lorenzo, family physic 480
Drawings, anatomico-surgical.. 487
Duodenum, perforation of..... 174

E

Edward A. Holyoke, M. D., LL. D., memoir of..... 486
Efflorescence..... 193
Elementary treatise of materia medica..... 486
Emmons, E., on nitrate of silver 208
Emphysema, universal..... 421
Endemic method..... 204
Epidemic of Calcutta..... 85
Epilepsy..... 301
Ether, new species of..... 195
Exanthemata..... 341
Extracts, medical.....161, 386
Extraordinary case of premature puberty..... 486
Eye infirmary, report of..... 229
Eyelid, artificial, Hopton's case of 305

F

Family physic of Lorenzo Dow 480
Fever at Gibraltar..... 491
——, typhus, Hildenbrand on 98
——————, Magill on..... 233
——————, at Berhampore. 87
——————, of Arracan..... 91
——————, in India..... 163
Fevers, Mackintosh on..... 330
——, intermittent..... 333
——, puerperal..... 438
Fistula in ano, new instrument for..... 479
Formula, Hope's..... 481
Fountain, James, M.D., on punctured wounds..... 308

G

Gangrene..... 89
Gastric juice..... 401
Gibraltar, fever at..... 491
Goitre..... 161
Gorrie, John, M. D., on delirium tremens..... 312
Graham, Dr., death of..... 230
Graves, Jno. James, M. D., on stillborn children..... 37
Gross, Dr., his translation of Hildenbrand reviewed..... 98

H

Hæmatemesis..... 469
Harvard University..... 490
Heart, mollescence of..... 291

Page

Heart, diseases of.....159, 369
——, diseased by onanism.... 409
Hemorrhage, uterine, tannin in 458
———— in abortion..... 468
Hernia, internal strangulated... 305
Heroic medicines in health.... 470
Higginbottom on nitrate of silver 423
Hildenbrand on typhus, reviewed 98
Hœgophony..... 152
Holyoke, death of Dr..... 229
Holyoke, Edward A., M. D., LL. D., memoir of..... 486
Hope's formula..... 481
Hopton, Abner, M.D., on orchotomy..... 304
————————, on artificial eyelid..... 305
Hospital, New York..... 488
————————, report of.. 224
Hydatid of the breast..... 377
Hydrophobia..... 87

I

Iliac vein, the left obliterated.. 412
Imagination, influence of..... 46
Indigestion..... 345
Infantile remittents..... 337
Inflammation..... 327
Insanity caused by a fall on the head..... 414
Instrument, new, for fistula in ano..... 479
Intermittents, pathology of.... 334
Iodine, preparation of..... 477
Irritable tumor of the breast... 383
Iritis..... 427
—— traumatica..... 430
—— syphilitica..... 432

J

Jaw, lower, changes of..... 395
Jejunum, tumor in..... 80

L

Lachrymal gland, extirpation of 186
Laidlaw on acetate of lead.... 460
Lee, Charles A., M. D., his pathological contributions..... 291
Leonard, E. A., M.D., on tumor in the jejunum..... 80
Leprosy..... 165
Libel, trial for..... 491
Liquorice, sugar of..... 477
Lithotritie successful..... 433
Lungs, diseases of.....146, 362
Lying-in hospital reports..... 191

M

Mackintosh, John, M.D., his elements of pathology, &c..... 323
Magill, Alfred T., M.D., his prize essay on typhus..... 233

	Page
Magendie on the brain	393
Mammary tumors	380
Marshall on the examination of recruits	350
McNaughton, James, M. D., on polysarcia adiposa	317
Medical Society of the State of New York	9
———, officers and transactions of	226
——— of the City and County of N. Y.	480
——— of the County of Westchester	489
Medical and Physical Society of Calcutta	84
——— and literary annals	481
——— Institution, Berkshire	490
———, New Hampshire	491
Memoir of Edward A. Holyoke, M. D., LL. D	486
Menses absent after puberty	410
Mercury, influence of, on the uterus	475
Meteorological report	281
Midwifery, difficult cases of	188
Mills, Thomas, on diseases of the trachea, &c	359
Miscellaneous notices	218, 487
Mott, Valentine, M. D., his biography of Dr. Post	217
N	
Neuralgia ophthalmia	416
New York Hospital	224, 488
———, medical society of the city and county of	489
New Hampshire Medical Institution	491
New journal at Baltimore	491
Nitrate of silver in aphthæ	208
——— in inflammatory diseases	423
Notices, quarterly bibliographical	215, 481
———, miscellaneous	487
O	
Ogden, John D., M. D., on scirrhus pylorus	77
Onanism	409
Ophthalmic neuralgy	416
Opium, use of, in inflammatory diseases	81
Orchotomy	304
P	
Patent medicine of Thompson	212
Pathology, elements of, by Mackintosh, reviewed	323
Pathology, annual contributions to	291
Pathological anatomy	323
Pharmacy, college of	220
Phthisis	182
Physics, elments of, reviewed	129
Physicians and surgeons, college of	487
———, western district college of	488
Pierce, E., M. D., on strangulated hernia	305
Placenta expelled three months after abortion	191
Plague	388
Pneumo-gastric nerves, ligature of	171
Poisons, detection of	199
Polysarcia adiposa, McNaughton on	317
Post, Wright, M. D., on opium	81
Premature puberty, extraordinary case of	486
Prussic acid, tests of	197
Puerperal fever	438
Pulmonary artery, rupture of	89
Pulse	141
Punctured wounds, Fountain on	308
Pupil, double in the eye	170
Pylorus, scirrhus of	77, 70
Q	
Quarterly bibliographical notices	215, 481
R	
Rangoon, diseases of	94
Recruits, examination of	350
Rectum, stricture of	117
———, carcinoma of the	125
Remittent fevers	336
Review of transactions of the Medical Society of Calcutta	84
——— Hildenbrand on typhus	98
——— Salmon on stricture of the rectum	117
——— Arnott's physics	129
——— Colin's manual for the stethoscope	144
——— Mackintosh's elements of pathology	323
——— Turner's elements of Chemistry	346
——— Marshall on the examination of recruits	350
——— Mills on diseases of the trachea	359
——— Sir Astley Cooper on the breast	372
Rhus vernix, Dr. Christy on	21

	Page
Rogers, Dr. D. L., his new instrument	479
Rumsey, James S., M. D., on scirrhus pylorus	70
———, on hypertrophy of the stomach	*ib.*
Rupture of the pulmonary artery	89
S	
Salmon, Frederick, on stricture of the rectum	117
Sciatica, turpentine used in	476
Scirrhus of the pylorus	70, 77
Silver, nitrate of	208, 423
Sleep, remarkable instance of	171
Smallpox	178, 180, 206
Spleen, diseases of	95
———, suppuration of	174
Stethoscope, manual for the use of	144
Stillborn children, increase of	37
Stomach, hypertrophy of	70
Stricture of the rectum	117
Suffocation	300
Sulphate of quinia, substitute for	478
Sulphuric acid, poisoning by	189
Superfetation	393
Surgical operations, descriptions of all the	487
T	
Tannin in uterine hemorrhage	458
Tartar emetic, effects of light on	192
Temperance, address on	216
Tests of Prussic acid	197
Tetanus, traumatic	177, 295
Thomsonian practice of physic	210
Thorax diseases of	150
Topography, medical, of Arracan	90
Trachea, diseases of	359
Traité elementaire de matiere medicale	486
Trial for libel	491
Tumor in the jejunum	80
Turner's elements of chemistry	346
Turpentine in sciatica	470
Typhus, Hildenbrand on	98
———, Magill on	233
U	
Umbilical vein, inflammation of	413
University of the State of New York	487, 488
——— of Harvard	490
Urethra, stricture of	141
Urinary concretions	196
Uterine hemorrhage cured by tannin	458
Uterus, cervix of, amputated	184
———, influence of mercury on	475
V W	
Vagina, imperforate	178
Vesication useful in preventing abortion	30
Wounds punctured, Fountain on	308